



ipm in park MAGAZINE

#62 • volume 12, issue 2 • 2016

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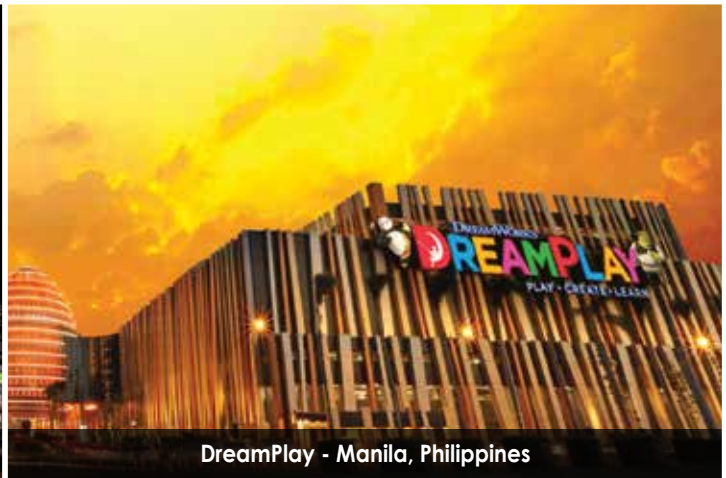


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Exist through retail

Martin Palicki,
IPM publisher



It seems compulsory to mention Shanghai Disneyland in this editorial. Everyone is talking about all the benefits Disney's entry into mainland China will bring to the industry. Experts and fans alike anticipate the quality of parks to rise across the board. And while we collectively are most impressed with and tend to focus on the attractions found in parks, the real industry story is in the retail.

Disney is in China because it believes (with great amounts of research to back it up) that Chinese consumers are interested in and able to buy Disney products. Disney's presence in that market is a clear sign that what everyone has been talking about (a rising Chinese middle class with disposable income) is very real.

The potential profits from retail sales inside theme parks have been slowly changing the leisure attraction model. Where our industry once joked about a successful attraction having an "exit through retail" component, we now seem to be shifting that to "exist through retail."

Leisure consumer shopping has become a popular social activity. Last month, while I was in Dubai, Judith Rubin was at the Disney World summer media preview. At the time, she was experiencing the new Disney Springs. We commented on how, a world apart, we were both experiencing leisure attractions through upscale shopping retail.

I think it's a happy marriage between the park format and the mall concept. Both are battling the at-home market (online shopping and online entertainment) and finding success in the same solution. By providing entertainment experiences one can't find at home and combining it with unique shopping experiences, the two are successfully finding their niche in the leisure industry, both in Shanghai and around the world.

Tourists and culture from India begin to have an impact

Joe Kleiman,
IPM news editor



According to India's National Council for Economic Research, that country's middle class is expected to double over the next decade to 547 million individuals. As with China, a dramatic increase in the middle class will organically lead to growth in the attractions sector. We're seeing that already with the expansion of the waterpark industry in India and with recent announcements by the UK's Merlin Entertainments, India's Adlabs, and China's Dalian-Wanda Group to build new attractions, large scale theme parks, and resorts within India.

The effect of the Indian middle class can be seen on global tourism as well, particularly in countries like Singapore and the UAE with large expatriate communities. In both these countries, visitation from the Indian subcontinent has consistently ranked within the top five of foreign markets. As a result, destinations like Resorts World Sentosa and Ferrari World Abu Dhabi have begun catering to the Indian tourist, by among other things adding restaurants specializing in Indian cuisine. Ferrari World also recently celebrated Duwali, the Hindu Festival of Lights, with T.P. Seetharam, India's Ambassador to the UAE, participating in the ceremony.

In October, India's great cinematic art form, Bollywood, will be given its own blockbuster theme park. This new park will be located in Dubai, where it will appeal not only to Dubai's diverse local and tourist population, but also the more than 1 million Indians per year who visit the UAE. And the growing Indian middle class will continue to make its mark on the global attractions landscape.

COVER: An image of the Washington State Coastline from "Wings Over Washington," the flying theater attraction at Seattle's Pier 57, created by Super 78. **Full story on p 32**
Cover credit: Super 78



InPark Editor Judith Rubin is a top writer, blogger, connector, consultant and publicist serving the international attractions industry. Her editorial acumen, understanding of diverse market sectors, ability to spot trends and affinity for social media have helped IPM grow and flourish.

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InPark Magazine (ISSN 1553-1767) is published five times a year by Martin Chronicles Publishing, LLC. 2349 E Ohio Ave. Milwaukee, WI 53207. Shipping address: 2349 E Ohio Ave. Milwaukee, WI 53207. Phone: 262-412-7107. Printing by Short Run Printing

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Postmaster: Send address changes to InPark Magazine 2349 E Ohio Ave. Milwaukee, WI 53207. Subscriptions are available annually for \$45 per year (\$70 international).

Opinions expressed in editorial matter are not necessarily those of InPark Magazine or its publishers, Martin Chronicles Publishing, LLC.

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The hot seat: Alex Calle

Design legend Jeremy Railton's
company has a new CEO

interview by members of the EDC team



Introducing Alex Calle, the new CEO of Entertainment Design Corp. (EDC), fresh from a project for Dubai Parks and Resorts, in a friendly interview with his EDC colleagues.

Jeremy Railton (company founder and Chairman): What were the circumstances that brought you to EDC?

The year was 2009, and I was out of work. In a second-hand bookstore, I found a 1998 edition Local 800 Art Director's Directory and recognized an opportunity. I went straight home, wrote out a pitch and started making calls. The book was about 150 pages, but I was determined, so beginning at "A," day by day I made my way through the list. By the 50th call, I had my pitch down to about 20 seconds... just enough to get my future employer to say "Yes."

I was 24, and had ambitions beyond being a draftsman. I knew I could art-direct, but not many people shared my conviction. Roughly two months after I started my cold calling, I reached the R's and landed upon Railton, Jeremy. I called, gave my pitch and waited. Without skipping a beat, Jeremy, in his always heart melting tone, said, "What are you doing tomorrow?" I went in for the interview, started the next day, and was on a plane the following week to art direct a project in Singapore.

Several years later I found out what got me the job that day. It wasn't my pitch nor my portfolio - EDC was just in desperate need of an art director who would travel, and travel immediately. Being at the right place at the right time brought me to EDC.

What were the major influences and events that shaped your career and empowered you to rise from an art director to a principal designer and CEO in seven years?

I grew up in a single-parent household and my mom worked incredibly hard as a waitress to make ends meet. One of the best things she did for me as a young kid was to find the cheapest day care providers around - the local community theater.

From the first day she dropped me off to help with the Lake Worth Playhouse's newest production, I was hooked. I would head there straight after school. There was always something going on at the theater, whether a strike, new set build or a rehearsal and I was absorbing it all.

It became my life and never let me go. I discovered that telling stories is what brings theater artists together in a variety of mediums - acting, costume design, scenic design, lighting design, directing, producing - and with little or no money. So inevitably, 'I can do that' became my motto.

If nothing else, theater teaches courage and conviction. It gave me the determination to venture from Florida to the California Institute of the Arts in Los Angeles. It gave me the determination and ambition to cold-call so many people and finally land at EDC.

Under your guidance, the recent work that EDC completed for Dubai Parks & Resorts - Concept through Schematic Design for two major attractions - just from the sheer volume and time pressure, has expanded the capacity of our company to an exciting new potential. What are your personal ambitions for EDC and what do you dream about?

I dream about a company that strives to stay creative, to do new and interesting work, and isn't afraid to be bold and flexible. I used to think that a bigger company meant a better company, but in a world that is more and more in the cloud, less settled into bricks and mortar structure, and changing at an ever faster rate, it may be better to be small, agile, and quick. This gives EDC the power to focus on a select group of projects with a small team that inspires other artists to work in the same manner and aesthetic that EDC is known for.

Alison Picard (Production Manager): As CEO you have to oversee contracts, proposals and negotiations as well as manage a creative team. How do you balance these right and left brain functions on a daily basis?

I truly love both aspects of the business equally. Without creative there wouldn't be an opportunity for business and without business there wouldn't be the opportunity for creative. It's a respect that was initially born out of growing up in community theater where there was a lot of creative energy, but no money to do what we really wanted.

EDC workdays can quickly turn into 14-16 hours when we're involved in a heavy project. Bouncing back and forth between negotiating a 24-month warranty period with a vendor and then heading into a creative meeting where we're discussing subtle color changes and nuanced lighting is what keeps me going. I love it and I wouldn't ask for anything different. I really think that working both sides is what keeps me balanced. I never get bored and I'm always on my toes. I'm in Billy Flynn's three-ring circus from Chicago and it makes me really happy... it's my zone.

Kurt Gefke (Art Director): What is it that makes you get up and go to work every day? Is there a driving element that keeps you swinging for the outfield?

Yes, definitely. It's the conviction that we are making people happy by entertaining them. We are in a service business, the business of entertainment and even though there are crazy things going on in the world that seem more important, entertainment raises the quality of life for rich and poor.

There are so many incredible ideas floating around. All we have to do as a company is to reach up, grab them, and focus all of our attention on making them become real.

People were shocked when we proposed two hundred-foot industrial cranes that danced and fell in love, but we built them - and The Crane Dance at Resorts World Sentosa in Singapore entertains guests to this day.

People looked confused when we suggested a 22-foot diameter diamond that would magically appear and float above a

fountain, but we built it and The Fortune Diamond at The Galaxy Macau is still considered one of the top ten things to see in Macau.

We swing for the outfield because we must. The talent EDC has within its walls is incredible. My conviction is simply that there is no reason why we shouldn't try and why we can't get a home run every time.

I have always been fascinated by the power of a story. I want to tell as many stories as possible and to as many people as we can entice to participate in a world that takes them out of their everyday lives. That is the key to the type of work EDC does. Every paint chip, every movement, every word, every decision is made to help tell the story, and that is what keeps me enraptured on a daily basis.

Before you took off on your own pursuit of knowledge, who showed you the way?

I've been incredibly lucky to have a huge village of mentors throughout my life. Every artist I've ever had the pleasure of working with has shown me what incredible work a team can create with a bit of gumption, grit, passion, professionalism, and talent.

However, there have been a few 'life mentors' that have had a profound impact: Joe Vumbaco, a child of the Great Depression and one of my best friends growing up, taught me how to be a gentleman. My uncle, Milton Hutto, a commercial real estate developer, showed (and continues to show me) that business can be conducted with honor and integrity - that 'business' isn't just a word but a way of life. Jeremy Railton teaches me what being an incredible artist truly means - how sharing your heart with as many people as you can every day, brightens the world.

Jamie, the love of my life, is my inspiration, muse, and partner. After 15 years she continues to show me the true meaning of unconditional love. But most of all, my mother has, and continues to be my biggest mentor. She constantly reminds me what can be achieved in life, and how far you can go if only you believe you can. She has always been my biggest fan, my harshest critic, and a shining beacon in the storm. She is the reason I am who I am today, and who I will be tomorrow.



Alison: What type of new project would you like to see EDC take on in the next three years?

Along with our incredible work in themed entertainment, I would love for EDC to revive its design work in the concert and theater arenas. To that end we have recently done Nicki Minaj's Pinkprint Tour and a new Princess Cruises show that has just opened on three of their vessels. We've always prided ourselves on a varied portfolio of work, and it's that diversity that keeps us fresh in every discipline we practice. Theater is where most of our artists have their roots, and I speak for us all when I say we're all hungry for our next theater fix.

Francesca Nicolas (Production Designer): What are the most important tasks that you face daily as a leader in your organization?

Ha, "Don't sweat the big tasks, just divide and conquer the little ones," besides, while you worry about that big task, it'll be the small one that ends up biting you in the ass. The devil really is in the details.

One of my biggest tasks as a leader is to enable, interest, and focus our creative team. This demands a set of clear tasks previously laid out. I try to work toward that every day. I'd say trying to stay ahead of that group of talented, ambitious, and obsessed people and molding them into a cohesive team is the most important of my tasks.

What are you doing daily to ensure your growth and development continues as a leader?

I try to be open to those around me. I try to learn from the employees at EDC. They're the reason EDC is successful and they are one of the biggest measures of how I am succeeding at my job.

So plainly, I ask them what I can do better and hopefully I have empowered them enough to give me honest and meaningful comments. I never want to be the smartest person in the room or the person with the best idea; I want to be the best listener who recognizes the best idea.

How do you pick the best candidates for a project?

With many of our projects, deadlines are tight and we find ourselves spending 70+ hours a week with co-workers. While talent will get you in the door, I want to work with someone I like, someone as obsessed with the project as I am and that I can have a beer with after work.

Richard Wechsler (Director of Projects): How do you see EDC, under your guidance, differentiating itself from

its competitors such as The Hetteema Group, BRC, and Thinkwell?

Well, it's wonderful that EDC can be named in that list, but I don't believe we are competitors. We're all quite different from each other, each with a distinct type of product - not better or worse, just different. Monet, Renoir, and Degas were all around the same age, self-proclaimed impressionists, and lived in Paris at the same time. And though they might have thought it at the time, it would be hard today to label them 'competitors.'

EDC has a very unique creative/service model: we think of ourselves as the modern-day commissioned artist. We are not a large company and pride ourselves on that. Yes, we are a corporation legally, but we operate on a very personal basis even with our large clients. We often say that we are co-creators with our clients; we can dream of wonderful things and amazing experiences but unless the client has a sense of ownership we know there will not be the concentration on maintenance and dedication that is needed to keep the attractions running 24/7. So instead of differentiating ourselves from our other design firms, it's more about positioning ourselves.

EDC has built a niche business of creating: Branded Icon Attractions (such as Crane Dance and The Fortune Diamond), Experiential Retail (such as the Panasonic Pavilion at Universal Studios Hollywood, Fremont Street Experience in Las Vegas and The Place in Beijing) and Live Shows (such as Nicki Minaj's Pinkprint Tour and the 2002 Winter Olympics Opening and Closing Ceremonies). That is the kind of work we like and that is the kind of work we want to pursue.

Up until now, Jeremy Railton has personified the EDC brand and his relationships with clients have been the tentpole of EDC business. Do you see this model sustaining or morphing under your leadership?

We're now in a process of shifting the brand to more of an EDC product. It's the same company; Jeremy is still here and more engaged than ever, but we are more focused on the company as a brand going forward whilst keeping the personal experience we have built so far.

We want clients to recognize that Jeremy's initial thoughts on design and production have permeated the design world as a whole. It's that infusion that has affected our collective EDC design ethos and is now what EDC strives to do every day. The 'personal relationship' model will continue to thrive. I have taken the mantle of CEO, however, I am hoping clients recognize the quality of projects EDC has built under Jeremy's leadership these last 20 years will be the same product EDC continues to build for the next 20 years. ...



Augmented Reality turns the Holovis booth at DEAL into a virtual battleground

Mixed realities

Holovis explores virtual reality, augmented reality and the practical reality of making it all work



Stuart Hetherington
CEO, Holovis

Real-time media is changing the potential scope of attraction design, putting true interactivity, mixed reality and personalization of the journey into the hands of every user. We believe this will become the new minimum benchmark in experiential design for the attractions industry.

It's no longer just about the core attraction. Real-time media and interactivity can be extended to all facets of the experience: the queue lines, the pre-show, post-show and even retail areas, increasing guest engagement on multiple levels.

What is real-time media?

Real-time media uses game engine technology, also known as image generation, rather than traditional linear or pre-rendered content. Real-time content is organic, made up of individual elements that can be accessed and reworked, changed, deleted or added to as often as is required. This means the attraction media can be changed and adapted on-the-fly, story paths can evolve depending on player choices made, new levels can be unlocked when high scores are achieved, and player voting can affect the direction of the game. It facilitates and simplifies re-theming attraction media for seasonal or special events.

Within the real-time arena, attractions can also be guest personalized live at the park or through pre- and post-park engagement via social media and apps or updated with seasonal upgrades. Corporate brand elements can also be easily embedded to attract a wider audience and alternative revenue models. This can also be achieved by extending the experience around core

attractions when combined with gaming elements that can be completed outside of the main attractions space. For example, as part of a park's general iOS or Android app, guests can download an extended experience to engage with elements of the different attractions before queuing and riding, using gamification within the park enhanced with our Augmented Reality technology. This allows guests the ability to earn points, upgrades or personalization of the attractions before riding.

For attraction destinations that have a high rate of returning visitors, such as FECs, this approach also increases attraction repeatability as the experience can be different each time, depending on the path riders choose to take or their game play status unlocking secret elements, power-ups, achievements and bonuses.

In-home, out-of-home

Theme parks, FECs and visitor attractions have a constant need to differentiate themselves and their out-of-home entertainment offering, and to keep raising the bar. With so much high-end home entertainment technology easily available to consumers, the experiences people have in paid-for leisure spaces need to be significantly scaled up to levels unavailable anywhere else. At the same time, in-home and out-of-home facets of the

experience can be developed to reinforce one another. That's one of several areas where Holovis is focusing R&D: to connect the in-home and out-of-home technologies into a seamless, totally integrated experience.

Mixed reality environments

The area we see creating a step-change in experience design is when the two realities of VR and AR dynamically combine in real time, allowing the creation of a Mixed Reality (MR) environment. MR allows the user to move freely and safely in the space whilst being exposed to amazing effects and extending the boundaries of storytelling. What's real and what's imagined are now blended using the core VR and AR technology alongside projection mapping, actual show sets, virtual assets, spatial audio and special effects. This has the power to take guest immersion to a whole new level, with the added benefit that the gamification layer introduces almost limitless possibilities for individual gameplay and group interaction as well.

Holovis Media believes in the future of Mixed Reality to the extent that we have created an internal team of dedicated MR specialists. The team includes technologists, solution architects, story tellers, creatives and programmers, supported by test-cells, demonstration and R&D facilities at our UK head office. They are



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already engaged in creating immersive experiences for several major clients.

Approaching design experientially

Behind the scenes in the visioning and development stages of a project, real-time media is influencing attraction designers to approach their work differently, from an experiential viewpoint. The use of virtual reality CAVEs and proprietary software solutions such as Holovis RideView™ technology means that attractions and experiences through to whole site masterplans can be visualized in interactive 1:1 scale through 3D volumetric projection, with the world moving to the true perspective of the user through head- and hand- tracking devices.

This technology facilitates more accurate design review, simulation and testing of an entire park or attraction, including facility impacts and layouts, as well as sight-line analysis right down to individual seat level, taking into account the range of permissible guest heights. RideView™ has already been applied in major attraction and park development projects and we find that it facilitates higher quality decision making across a range of functional requirements, while saving money and reducing risk.

Integrating of visuals, motion and gameplay

Transporting theme park guests into alternative realities calls for a precise integration of purpose designed real-time, intensive game play with complex 3D immersive visuals, spatial audio, organic and dynamic motion technology, highly accurate interactivity and special effects. We think that's best done internally, and so Holovis relies on its in-house software development division and creative media and game development teams to facilitate turnkey solutions under the Holovis Attractions and Holovis Media brands. Having the creative design team involved at every stage of a project generates creative storytelling that informs the final experiential design, while making sure guests are at the heart of the story with the right technology and hardware systems to deliver the required immersion and engagement throughout. ...

Holovis (www.holovis.com) is a world leader in sensory experience design in the Entertainment, Industrial, Retail and Retail Brand sectors.

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Rendering from the Dabangg stunt show. Images Courtesy Dubai Parks & Resorts

Bollywood action

India's crowd-pleasing IP for
theme park attractions

by Judith Rubin

India has been referred to as the sleeping giant of entertainment development, a market with the potential to one day outpace the current explosive growth of destination attractions in China. While there have been some inroads, a large-scale manifestation is still some years off. Meanwhile, India's entertainment export, Bollywood cinema, has a long standing and widespread appeal that goes far beyond its native country and is the foundation of an entire theme park: Bollywood Parks™ Dubai, part of Dubai Parks and Resorts, the region's largest integrated theme park destination opening in October this year.

The 2.1 million square foot park includes five themed zones and 16 rides and attractions "dedicated to all things Bollywood." And there's reason to think that once it opens, more designers, operators and developers will begin to recognize the power of Bollywood intellectual property (IP) and adopt it. That's certainly the opinion of Bob Chambers and Edward Marks, co-CEOs of The Producers Group (TPG), an international production company providing show production and equipment for an elaborate, high-tech, live stunt show based on the Bollywood hit action film franchise "Dabangg," for Bollywood Parks™ Dubai.

In the news about Dubai Parks and Resorts, most of the attention has gone to motiongate™ Dubai, which will showcase Hollywood characters from DreamWorks Animation, Sony Pictures Studios and Lionsgate and two LEGOLAND parks.

And yet, Dubai is full of billboards featuring Dabangg star Salman Khan. He's a celebrity in the UAE, where people are crazy about Bollywood movies and grew up watching them. "They know Shrek, they know Madagascar - but those aren't the celebrities with an emotional connection for them," says Chambers.



"The Bollywood park"

Chambers and Marks believe Bollywood Parks™ Dubai is going to be the sleeper hit of the Dubai Parks and Resorts complex, and that many others will soon be eager to acquaint themselves with and license lucrative Bollywood properties for new guest experiences. Over the past 20 or so years, they've worked on many IP-based attractions around the world, and their clients include top theme park operators. In addition to providing technical design, engineering and project management, they offer consulting services to designers and IP owners looking to make the most of a property. Through the experience of working on the Dabangg stunt show and spending a great deal of time in Dubai, they've developed a keen sense of how beloved Bollywood is in the region.

"We've both been impressed by the depth of familiarity and interest we have encountered, and how excited the Middle Eastern community is about this park. Locals refer to 'the Bollywood park,' to indicate the entire complex," says Marks. "Bollywood is what identifies and differentiates it for them. Bollywood is what touches them."

Why is Bollywood so popular in the UAE? "In terms of social values, Bollywood culture is very compatible to Middle East culture, especially those following Sharia law," says Marks. "It's great storytelling that entertains while conforming to certain values. It's colorful and musical, with plenty of excitement, romance and action. The stories trace classic themes with traditional male/female roles, dress and behavior. Many people in the Middle East have been watching Bollywood movies since childhood, with the approval of their parents. Maybe there's just a little bit more sauciness in the newer movies. That's a good fit with Dubai."

Cross-cultural effects

Marks and Chambers aren't the only ones to notice the penchant for Bollywood outside India. An article in the March 11, 2014 edition of The National, a UAE news outlet, is titled "Bollywood craze grows ever stronger with audiences in Middle East." Reporter Preeti Kannan cites the audience appeal of well-acted movies that blend comedy, action and romance, and the cultural similarities. "The rising number of viewers in the Middle East and North Africa has prompted television stations in the UAE and across the region to dub popular soaps and films into Arabic," writes Kannan, noting that the Pan Arab conglomerate MBC Group recently launched MBC Bollywood to serve this interest.

There's reason to expect to see Bollywood IP applied to attractions in China as well. The Asia Times June 2, 2015 story by Dr. Sudha Ramachandran, "Budding romance: Bollywood in China," reports on the growing popularity of Bollywood films in China and collaboration between the Indian and Chinese film industries. Dr. Ramachandran points out that it is local Chinese

who are watching the Bollywood movies and that "Bollywood films have a massive following in South Asia, Central Asia, the Gulf and Africa... Audiences enjoy its song and dance routines and connect easily with its family and community oriented themes."

But even regions that are not, as a rule, considered socially conservative have flocked to Bollywood as a great and evocative art form. A May 3, 2012 story on BBC.com reports on the impact Bollywood cinema is making on non-Indian communities around the world, including Germany, North Africa, Spain and France. The story reports that "the craze for Bollywood movies is resulting in Western actors coming to Mumbai to look for roles."

The past few years have seen a surge of major studios embracing the theme park medium as never before – with park operators and land developers returning the embrace. The east-west cultural influence will continue to flow in both directions as the destination attraction sector continues to expand and evolve. Because of family-friendly, entertainment-rich, audience-beloved Bollywood, India is going into theme parks even though it may take a while for theme parks to go fully into India. ...

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Creating the unexpected at London Zoo's Land of the Lions

In March, the ZSL London Zoo opened 'Land of the Lions', a new Asiatic lion enclosure. The 2,500 square meter development is dominated by three walkways and features highly themed, immersive areas to explore, allowing visitors to get closer than ever to the mighty lions.

Inspired by the landscape and villages in the Indian Gir Forest Region, the land was designed by Ray Hole Architects and the Zoo's in-house exhibit developers. It follows the trend of creating habitats that support animals' natural behaviors (see <http://www.inparkmagazine.com/designinganimals>).

The Zoo sought to recreate the area the Asiatic lion resides in. But this setting also, uniquely, evokes something many visitors won't be expecting. Lions in Gujarat, India live extremely close to the local residents and their paths cross on an almost daily basis. By recreating an authentic high street from Sasan Gir, guests to the zoo immerse themselves in the Indian culture and nearly invisible barriers allow them to seemingly share the same space with the lions.

The project also includes nine small cottages where guests can spend the night next to the lions and enjoy special evening and early morning guided tours. Land of the Lions was officially opened at the ZSL London Zoo by Her Majesty The Queen in March 2016.

InPark's Martin Palicki interviewed Project Manager David Johnson of Paragon Creative, a British design/build company known for their experience in scenic theming and rockwork, on their role in creating 'Land of the Lions.'

What was the scope of your company's involvement in the project?

Paragon Creative was contracted by the Zoological Society of London to create approximately 850 square meters of rock and stonework to form the temple ruins and the train station. We also supplied theming and props to help reflect the detail of the Indian originals. This included a ranger's tent, a campfire and camp equipment, railway station packing cases, a railway signal and a series of railway signs.

Both the temple ruins and train station are key components of the exhibit where guests come face-to-face with the lions in a very natural, realistic environment. Attention to detail in these two areas was critical.

What was special in the way Paragon realized this project?

We developed techniques that we had not tried before, particularly with regard to the mixing and combining of materials for the scenery. We also produced a lot of the main

rockwork armatures off site and transported them to the project, securing them to the completed block walls prior to meshing up and applying the Themecrete finish. This was another first for us, and proved to be a very effective construction method.

What were some of the challenges you had to overcome?

The most challenging aspects were the logistics and sheer magnitude of the work. During the course of the project over 120 tons of concrete were shipped to site, unloaded, and applied by our team. We were working on a very busy site on some quite challenging terrain but our experienced install teams have worked on a wide range of sites over the years and handled the install difficulties very well.

What do you see as some highlights of the project design and its finished form?

Personally I find the finished project to be simply breathtaking. We particularly love the theming on the Temple Clearing, which is a special viewing area themed as a crumbling Indian Temple, including a 180-degree view into the lions' enclosure. Here, special high-tension wires are used as a barrier between the visitors and the lions. The size, architectural complexity and finish of this area are stunning.



Photos courtesy of Paragon Creative

Do you have additional zoo projects in the works?

Since Land of the Lions opened, we have been contacted by another major UK zoo, who saw what we achieved at ZSL London Zoo. This is the biggest compliment that we can receive as a company and our team is delighted by the result. ...

More info: paragon-creative.co.uk • inparkmagazine.com/londonlions

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Travel bug: Japan

Japan's strong tourist markets, inbound & outbound

by Kristie Wong, btrax

What countries rank at the top for inbound and outbound tourism for Japan?

Inbound: Record international visitation especially from China

Japan is one of the top tourist destinations in Asia. In fact, the Japan National Tourism Organization (JNTO) reported in 2016 that for the first time in 45 years, the number of incoming travelers surpassed the outbound figure.

Theme parks are extremely popular in Japan, not just with tourists but also with the locals. In fact, Japan has been rated the top theme park destination in Asia. In 2014, the top three most visited theme parks in the region were Tokyo Disneyland (17.3 million visitors), Tokyo Disney Sea (14.1 million), and Universal Studios, Japan (11.8 million). In a distant fourth place was Hong Kong's Ocean Park with 7.79 million visitors in the same year. [Source: 2014 TEA/AECOM Theme Index.]

In 2015, Japan had a record number of international visitors, reaching over 19.7 million (+47.1% from 2014). This is recorded as the highest growth rate since 1964, when JNTO first began collecting data. The Japanese government set a target of 20 million foreign visitors in a year by 2020, but with this

momentum, they are on course to not just achieve but surpass it completely. This success has sparked the government to consider revising the target upward.

For the first time, China became the country with the most tourists visiting Japan, with nearly 5 million visitors (+107.3%), occupying one-quarter of the market share. This growth can be explained by a number of factors. The rapidly burgeoning Chinese middle-class is one, and the depreciation of the value of the Yen is another. The Chinese were also by far the biggest spenders, accounting for 40.8% of the ¥3.5 trillion spent in 2015. So much so that the term *bakugai* (meaning explosive buying) has been coined to describe the shopping sprees of Chinese tourists.

See Figure 1 for some inbound travel statistics for the fourth quarter of 2015. Although China is the top ranking country here in terms of tourists in Japan, when you factor in population size, there's clearly still a lot of potential for growth. For example, Hong Kong and Taiwan are both considerably smaller than China, but send proportionally far more tourists to Japan than China does. With this high potential for growth, Japan can expect a lot more inbound tourism from Chinese visitors in the future.

Figure 1: Foreign tourism to Japan, 4th quarter 2015

Source: Japan Tourism Marketing Co.

	Oct 2015	yoy	Nov 2015	yoy	Dec 2015	yoy
The number of foreign tourists to Japan	1,829,265	+43.8%	1,647,600	+41%	1,773,100	+43.4%
Korea	370,842	+48.6%	359,800	+50.5%	415,700	+53.4%
Taiwan	343,601	+32%	296,500	+25.4%	265,800	+25.4%
China	445,562	+99.6%	363,000	+75%	347,100	+82.7%
Hong Kong	129,080	+66.9%	130,800	+53.4%	157,400	+48.2%
Thailand	86,001	+8.3%	76,100	+11.9%	93,500	+22.6%
Singapore	25,205	+25.1%	38,200	+43.1%	67,000	+40.1%
Australia	29,621	+23.5%	29,500	+33.2%	49,400	+31.4%
The entire USA	96,208	+16.6%	88,700	+21.1%	89,900	+22.2%
Canada	21,902	+23.9%	20,800	+28.5%	22,000	+24.3%
The entire UK	26,221	+7.9%	21,600	+16.9%	19,400	+14.7%
Germany	18,840	+14.4%	14,700	+13.6%	10,200	+14.2%
France	23,871	+18.3%	16,300	+22.7%	14,300	+10.2%



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Outbound:

Fewer tourists; evolving tastes?

In 2015, Japanese outbound tourism was hampered by the weak value of the Yen. Total outbound travel dropped from 2014's 16.9 million to 16.2 million, the lowest number since 2009.

However, this is not to say Japanese people stopped traveling. There were numerous countries that recorded year-on-year increases for Japanese visitors, including Taiwan, Hong Kong and the USA.

The month with the highest number of outbound travelers in 2015 was August, with 1.62 million. August is the peak travel season in Japan, with March ranking second. Among Asian destinations, Taiwan, Hong Kong, Vietnam and Macao all saw an increase in December compared to the previous year. Among resort destinations, Hawaii recorded 130,448 visitors in December (+3.8%) compared to 2014 and has increased for three consecutive months.

Figure 2 shows some outbound travel statistics for the fourth quarter of 2015. Although overall outbound numbers are down, various countries recorded year-on-year increases. On top of being an effect of the weak Japanese Yen, these changes could be a hint for the evolving tastes of Japanese travelers. ...



Kristie Wong (kristie@btrax.com) is marketing lead at btrax, a consulting business specializing in Asian market entry and rapid growth for top brands.

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	Oct 2015	yoy	Nov 2015	yoy	Dec 2015	yoy
The number of Japanese outbound tourists	1,412,466	-0.4%	1,339,246	-1.2%	1,346,500	-3.7%
	Oct 2015	yoy	Nov 2015	yoy	Dec 2015	yoy
Korea	180,348	-5.2%	164,685	-8.3%	159,877	-6.2%
China	233,000	-4.6%	212,200	-1.9%	206,200	-22.1%
Taiwan	149,500	+5.5%	159,431	+4.8%	169,366	+12.1%
Hong Kong	85,990	+3.2%	97,398	+9.3%	100,783	+9.1%
Macao	22,188	+1.4%	27,217	+8.8%	27,014	+8.5%
Thailand	97,043	-5.7%	115,525	-2%	125,161	-5.4%
Malaysia	TBA	TBA	TBA	TBA	TBA	TBA
Singapore	66,360	-3.3%	67,137	-3.3%	TBA	TBA
Philippines	36,332	+8.3%	TBA	TBA	TBA	TBA
(Bali Airport / Indonesia)	21,949	-1.5%	15,512	-19.6%	TBA	TBA
Vietnam	53,464	+6.8%	60,687	+8.7%	58,770	+4.4%
Canada	29,812	+6.7%	13,526	+11.3%	TBA	TBA
USA	TBA	TBA	TBA	TBA	TBA	TBA
(Hawaii / USA)	134,989	+0.1%	122,840	+0.3%	130,448	+3.8%
Guam	58,030	-4.3%	62,760	-3.4%	67,876	-2.3%
Northern Mariana Islands	4,929	-24.3%	4,423	-37%	6,374	-35.9%
Australia	29,000	+3.2%	32,500	+17.8%	TBA	TBA
New Zealand	6,272	+5.1%	8,144	+8.1%	11,376	+12%
France	TBA	TBA	TBA	TBA	TBA	TBA
Germany	118,665	+6.2%	93,258	-7.5%	TBA	TBA
Spain	103,744	+10.1%	92,348	+21.4%	74,653	+2.7%

Figure 2: Outbound tourism from Japan, 4th quarter 2015

Source: Japan Tourism Marketing Company



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Waterparks thrive where it's hot

Three leading waterpark suppliers provide useful insights on the latest global market trends

interviews by Martin Palicki



Sean Hinton

President, Waterpark and Attractions Division, [WhiteWater](#)



Sohret Pakis

Director of Marketing and Communications, [Polin Waterparks](#)



Ray Smegal

VP of Product Development & Design, [ProSlide](#)

What are the major hot spot regions of growth right now for waterparks?

Sean Hinton, Whitewater: The hot spots for growth in the worldwide waterpark industry today are the emerging markets of South Asia and South America. These areas are literally “hot spots” under the equator, experiencing strong economic growth. As the middle class grows in these areas, more people are becoming exposed to the waterpark industry.

Sohret Pakis, Polin: Studies have shown (and our personal experience can confirm) that there is a huge demand in Asia right now. Even countries that don't seem like potential candidates today are still candidates for the future, such as Iran. We are proud to say we built the very first waterpark there.

Ray Smegal, ProSlide: The United States, China, and Southeast Asia are on fire but waterpark growth is happening everywhere. Many countries are installing their first, modern waterparks while others are adding iconic attractions.

Who are some key players to watch in today's international waterparks/theme parks market?

Pakis: Key players include Marvel, Merlin, Disney, Universal, Cedar Fair, Six Flags, and Chimelong. I also believe we will see some surprising names pop up when it comes to investing in amusement parks, especially in Asia.

Smegal: Definitely keep an eye on the world's top water theme park developers: Siam Park, Triple 5 Group, Atlantis Sanya, Great Wolf Lodge, Six Flags ... to name a few.

Hinton: There is a lot of movement of traditionally regional companies within the industry starting to make moves outside of their traditional markets. This movement runs the gamut of our industry from owners and operators to designers and suppliers.

There are many examples but some of the international companies that have made their global expansion intentions known publicly include Wanda Group in China,



Singa waterslide (last year's first place IAAPA Best New Waterpark Ride) at Siam Park in Tenerife, Spain Courtesy ProSlide

Village Roadshow out of Australia, Six Flags out of the United States, Pierre et Vacances out of France, Merlin Entertainments out of the United Kingdom, and Samsung out of Korea.

What effect is the massive Asian growth in waterparks having on the more mature markets in the US and Europe?

Smegal: The explosion of new waterparks in Asia has a global impact. The top-tier clients have an incredible vision for premium water/theme park experiences and they want to be world leaders. This mirrors the US waterpark boom in the '80s and '90s and reinforces the value of each waterpark investment dollar.

The US market is by no means saturated, but most parks are adding attractions to existing sites. However, there are a few special groups that are continuing to raise the bar. Europe is definitely taking note of what's happening in Asia while putting its own unique spin on what makes a world leading waterpark. There are more indoor waterparks and they include high-end resort/spa experiences.

Hinton: The explosive growth of the Asian waterpark market is driving a significant amount of innovation in the industry; several new entrants are seeking the biggest, fastest, longest, tallest rides – this fuels innovation and new concepts in design and operations.

The movement is impacting how the mature markets consider expansion and long-term capital planning – nobody wants to be

left behind as the industry becomes much more sophisticated globally.

The Chinese consumer has sometimes been characterized as less thrill-oriented in their park going preferences than their Western counterparts. Do you find this to be true?

Pakis: I wouldn't say this is the case for waterparks. In general there is a limit to the "thrill factor" due to outside regulations



Siam Park in Tenerife, Spain
Courtesy ProSlide



Aquafantasy in Izmir, Turkey
Courtesy Polin Waterparks

(government, etc.). Despite this, the thrill expectation in this market is no less important than it is in other parts of the world. Both park planners and visitors are increasingly demanding thrilling waterslides, so in our upcoming projects, we are making sure we offer at least one fusion and signature ride, each with their own features and thrills.

Hinton: Waterpark guests in emerging markets such as China sometimes have learning curves in terms of levels of thrills

and excitement they can handle because they likely have not experienced them before. A 50-foot freefall waterslide may be very daunting at first; however, once they've taken the plunge the demand for the high thrill attractions can be just as great in those markets as in the mature ones.

Name some new installations that you think represent the best of today's global waterpark market.

Smegal: Siam Park is a true thought-leader in our industry and they opened the award winning Singha, our proprietary RocketBLAST™ + FlyingSAUCER™, in 2015. Stay tuned in 2016 for Atlantis Sanya and Universal's Volcano Bay in FL, USA. Both are excellent examples of the emerging water/theme park trend: world-class theming & attraction capacities that rival dry parks.

Pakis: Austin Heights in Malaysia opened in January 2016 and is a great example of how parks are combining outdoor and indoor attractions. This tropical-themed park offers a unique combination of waterslide designs from Polin Waterparks in a 33,450-square-meter area on 19.8 acres of land, along with a variety of indoor attractions such as an adventure park, a trampoline park, a tropical skating rink and a drift kart.

Hinton: Yinji Xinmi Waterpark is slated to open mid-June just on the tail end of the Asian Attractions Expo. This park is indicative of the types of tourism experiences being introduced in China; one park with a seemingly endless variety of experiences. These

Austin heights in Malaysia
Courtesy Polin Waterparks





Rendering of Yinji Xinmi Waterpark in Henan, China
Courtesy WhiteWater

destinations, sometimes the size of cities, are becoming very popular in China and throughout Asia as developers aim to offer guests a massive range of activities featuring a waterpark and a theme park in the same space—even sometimes including golf courses, hotels and more.

In what ways do you see the waterpark sector evolving in the next 5 to 10 years?

Hinton: Increasingly, I see the demand for international standard parks becoming more and more important to guests in emerging markets. This means incorporating international standard design, planning, construction, attractions and operations into young markets.

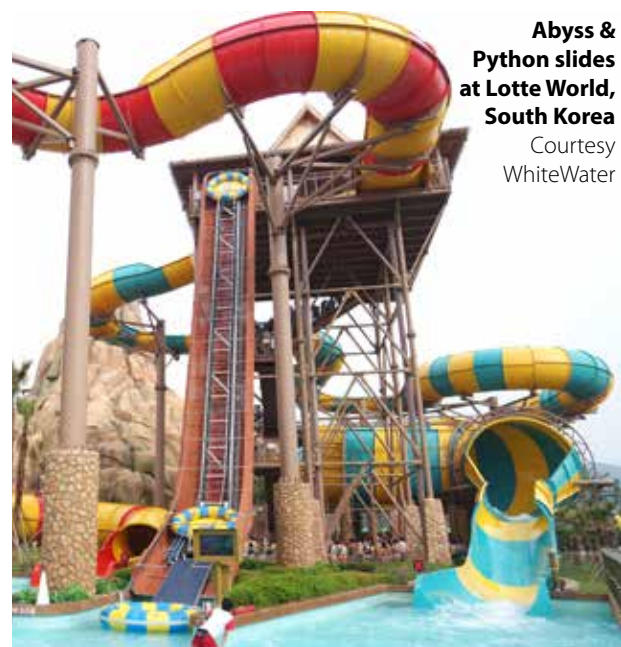
When families visit international entertainment destinations such as Dubai, Orlando or Hong Kong they want to experience that same quality of entertainment replicated in their own markets. The bar continues to get raised around the world as the international players expand into new markets.

As a result, I expect further consolidation and expansion of parks from the multinational entertainment companies such as the ones I mentioned earlier, Six Flags, Wanda, Village Road Show, etc. I see there being further partnership between local developers and governments, and experienced park operators.

Pakis: Technology will be a driving factor. I believe we will begin to witness the synchronization of technology with the attractions

and the parks themselves. Manufacturers are already integrating their manufacturing methods, material technologies, design programs, game technologies, virtual and augmented reality, projection technologies, media-based attractions and special effects into more and more waterparks.

As technology continues to improve, there will be higher demand for innovation, interactivity, and engagement from



Abyss & Python slides at Lotte World, South Korea
Courtesy WhiteWater

the customers. Social media, gamification, virtual reality, and augmented reality are all impacting the market now. However, at the end of the day, the content and storytelling in the park is still extremely important.

The UAE has several high profile waterparks, and is preparing to launch many new theme parks. Do you think there is a market for more waterparks in the UAE?

Smegal: The UAE is an amazing global destination and we admire their vision. Yas Waterworld, Wild Wadi, and Atlantis The Palm are extremely innovative waterparks that have redefined waterpark design. There will absolutely be more waterparks in the UAE and the Dubai Parks and Resorts project highlights that it's not a zero sum game. It will drive more tourists to the UAE and this in turn will provide opportunity for new waterparks to be successful.

How is the market in India doing?

Pakis: The Indian market is definitely expanding thanks to government subsidies and tax breaks for amusement and waterpark projects. The Indian amusement and theme park industry is set to more than double revenues. This year, it was at Rs 1,700 crore, but should grow to Rs 4,000 crore in annual

revenue by 2020. The sector is growing at a compounded annual growth rate (CAGR) of 17.5% over the past few years, according to The Indian Association of Amusement Parks and Industries (IAAPI). Currently there are waterparks in India, but I can't say they are well equipped or particularly noteworthy. However, Adlabs Imagica and Wonderland Theme Park are both good projects.

With Brazil hosting the Olympics this summer, do you think there will be a renewed global interest in South America that opens it up for more leisure development?

Smegal: Absolutely! The Olympics in Rio will be a celebration for Brazil and the world. Existing waterparks such as Beach Park and Wet'n'Wild Sao Paulo are world-class and they will definitely benefit from an increase in tourism. Despite Brazil's economic problems, Beach Park experienced a 6.5% attendance increase in January 2016 alone and was recently named the #2 water park in the world by Trip Advisor®.

These impressive ROI stories will continue to drive renewed interest in the region, as well as the inevitable surge of tourism activity for the Olympics. ...

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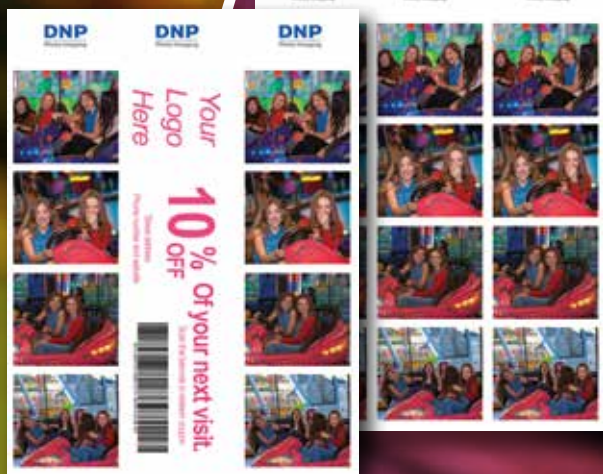
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Higher education

Themed entertainment becomes a degree program
by Matt Kent

The themed entertainment industry was formed by thousands of professionals from a variety of creative and technical fields who found ways to marry art, design, theater, technology and storytelling into compelling guest experiences and unique places.

They were pioneers - and they did not have a guide map...

Today, those leaders of industry have become the teachers. They have organized their thoughts and experiences, and are now dispersing that information as mentors to a new generation in a growing number of college and university classrooms.

How it began

The process of how these programs become educational curriculum is daunting. They begin as amalgams of existing coursework, pieced together by interested faculty members who see or sense an industry that has come into its own, and its career opportunities for students.

Don Marinelli is the voice of experience as Academic Director, Entertainment Technology Management Program at Columbia University School of Professional Studies. Some years earlier, Marinelli, whose roots are in theater, co-founded with the

late Randy Pausch the pioneering Entertainment Technology Center (ETC) at Carnegie Mellon University, considered to be the first-ever formal themed entertainment program of study.

"Oftentimes," says Marinelli, "the biggest obstacles are various university committees that must approve curricular revision, because they either don't understand what themed entertainment entails, don't see it as appropriate university-level study, or have an inherent disdain for higher education being seen as [vocational technology]."

Of course, this reflects the challenge of creating change within the academic institutional structure. But, "Happily, an increasing number of institutions realize and recognize that themed entertainment is - and has always been - the embodiment of STEAM education, a popular buzz-phrase in education today," says Marinelli. STEAM stands for Science/Technology/Engineering/Art/Math, and is the fuel behind the explosion of "maker shops" popping up throughout the country, either as standalone community locales or as part of K-12 education.

Things break

Marinelli shared some of the challenges of teaching themed entertainment. For example, theater departments would seem



One of FSU's classes on themed entertainment plans for a group project. Photo courtesy of Peter Weishar.

a natural stepping stone, save for the fact that theatre production calls for a set and related production values that only need to suffice for the run of the show, whereas themed entertainment requires quality workmanship that must endure extreme wear-and-tear. Marinelli has been frustrated by students' failure to embrace the need for ongoing maintenance of themed entertainment projects. "Things break, and technology breaks frequently," he says. "In order to fix technology there must be excellent documentation of the inner workings of the venue. Since school operates on a semester basis, there is all too often the impression that anything built need only function properly for 15 weeks. That thinking is a tough nut to crack!"

Marinelli found it important to have students work on projects outside of the academic environment. Building something for a third party acquaints the student with actual clients and what the project development process is really like. "The demanding timelines of working with a client while adhering to semester schedules is an amazing educational opportunity," he says. The process can even involve university attorneys and issues of liability and responsibility, but, then again, that too is a major part of themed entertainment production.

There was no degree in theme parks

"Well, it's interesting because one of the things we used to say was, 'there is no degree in theme parks,' and now there is," says MK Haley, Florida State University Faculty/Entrepreneur in Residence. "People have been designing themed experience for thousands of years without a specialized degree. People from theater, lighting, producers, writers... even military." She pointed out that even the specs on designing a roller coaster are not that different from those of a jet, when you consider how tight the tolerances have to be, the types of materials used, and the duty cycles.

There are many themed entertainment-based programs available now that have never been available before; most of which have been captured in what MK refers to as the "Google doc of awesome," her online compilation of resources and programs geared specifically to themed experience education. One such program is an online course inspired by Disney Imagineering, taught by Steve Alcorn of Alcorn McBride. The course has no official relationship with Disney, and offers no credential of any sort, but it conveys, at a high level, an understanding of various disciplines applied to theme park design, such as engineering, audio engineering and creative design.

Flexible degrees

According to Haley, more and more universities are allowing flexible degree programs in support of students who choose a self-directed curriculum via an advisory committee that approves them to choose specific courses. "Some may have a mechanical engineering degree," Haley says, "but decide to take

courses in theater so that they're a little better versed, particularly in their verbiage, when working in themed experiences."

Savannah College of Art & Design (SCAD) in Savannah, GA supports this type of hybrid program. "SCAD just introduced a minor in Themed Entertainment Design, which offers other majors a chance to broaden their education," says Gregory Beck, Dean, School of Entertainment Arts at SCAD. Beck is an "Experience Architect" with many themed entertainment projects to his credit – and who for years has taught an annual themed entertainment symposium at Harvard. "Most of our grad students don't have design skills when they come to school here. A grad student may have a Bachelor's in history, or sound design, or biological science, and a minor in themed entertainment design, and they are going to take different directions. We love those hybrid combinations."

Third generation

Entertainment design has reached a transition period; it is teaching a new generation, and what does that mean? Beck feels strongly that there was a legitimate need to formalize this type of education. "I believe we are in the third generation of theme park designers now," says Beck. "The original generation was trained with Walt Disney. Imagineering has always had a very unique method of design," says Beck. "It's an education in itself just to work there, but where else would you learn that? Now it's up to the rest of us to take a step forward and educate the next generation."

Storytelling is basic

It's important to consider that theme parks are only part of the focus of this new excursion. What can storytellers apply to other venues, and other businesses?

Rick Dakan, Professor of Creative Writing at the Ringling College of Art and Design, teaches creative writing for video games, which, he says, has a lot of similarities to conceiving theme park attractions. "There are many shared storytelling techniques between video game levels and theme park attractions," he says.

Creating story through environments is something that Peter Weishar, Dean of the College of Fine Arts at Florida State University, is familiar with. As a former animation professor at New York University's Tisch School of the Arts, he studied Disney's techniques in both themed experiences and in film, so there was a natural connection for him to develop a program that dealt with design and experience of story within space.

"We focus on teaching themed experience, what the industry is, and what the needs are. They're not learning from scratch," says Weishar. "These students are already great sculptors and artists, but they're learning the skills utilized in themed entertainment directly from leaders who are mentoring a new generation."

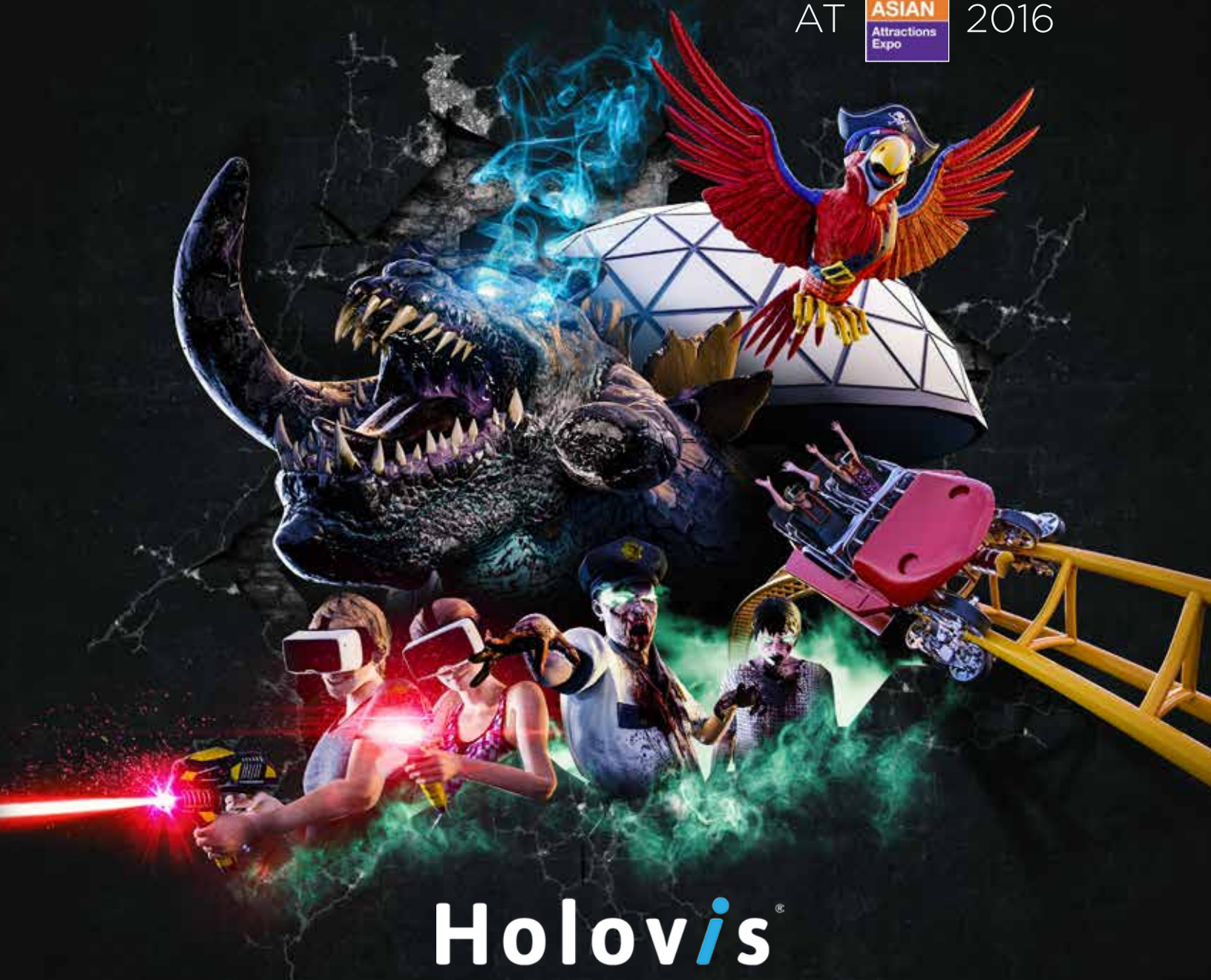
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One area where academia and the themed entertainment industry have found a mutually beneficial relationship is in student internships and co-op opportunities. Academic programs have done the themed entertainment industry a great service by finding those young people aspiring to work in the industry. It then becomes a process of finding the absolute best match instead of pondering where to look.

The pioneers are still pioneering

This is all still very new to the industry and to academia. The originators of themed entertainment curriculum are still the ones actively teaching and many if not most are still also actively working in the industry. They have been doing it long enough to move from one university to another, initiating new programming in the process and drawing in new players, often longtime colleagues.

Weishar says that the impetus of creating an academic program at SCAD initially began with a call to Walt Disney Imagineering, which hosted the class for five consecutive days, backstage with the designers and engineers. But it was worthy of a whole program. Inspired and encouraged by Don Marinelli and Randy Pausch's work at ETC, Weishar urged SCAD to hire Mike Devine and George Head, (both well known Disney creatives) who

became the core of SCAD's own Themed Entertainment Design Master's program.

Industry supporters include the Themed Entertainment Association (TEA) which connects with academia and students through its NextGen initiative and by holding its annual SATE conference on Experience Design at a university campus.

Mentoring the third generation

The mentorship and targeted training implemented in these programs is working, and leading to expansion of additional programs. In fact, Dean Weishar and an FSU committee including Aram Ebben of exp, Robert Ward (veteran of Universal Creative), and MK Haley (Disney), are currently developing new programming for the University. "I think there should be dozens of themed experience programs around the country," says Weishar. "This is a huge field, and it cannot be served by just a few Master's programs."

ETC faculty member Shirley Saldamarco developed Carnegie Mellon University's Guest Experience and Theme Park Design program in 2015. "The foundation of our program," says Saldamarco, "is teaching students to work on cross-disciplinary teams. Architects, engineers, designers, artists and business majors all learn to collaborate - and equally important - to communicate." She is currently designing a second program that will be offered beginning in the fall of 2016.

These educational programs are microcosms of the reality of the themed entertainment industry. As the industry continues to grow and evolve, as a huge new sector takes shape in Asia and guest expectations change with time and technology, there is also a generational changing of the guard. These initiatives have been spurred by the desire of industry leaders to share the wisdom and skillsets, as well as the work ethic and creative drive that add up to a unique industry whose trademark is excellence and a focus on the guest.

The second generation in themed entertainment is considering succession planning, and the third generation is preparing to carry on the torch. Since the inception of themed entertainment, those without former, focused degrees have been the ones to pioneer this industry. Hopefully, these valuable educational programs in themed experience design will continue to grow and improve; but even still, there will always be a place for real talent, regardless of what's written on a diploma. •••

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Ariel view inside a flying theater
photo courtesy Dynamic Attractions

Flying high

15 years after the first Soarin', flying attractions continue their rise in popularity

P. 32 Joe Kleiman looks at the evolution of flying theaters along with their media and AV support systems.

P. 44 Kevin Dazey examines the latest ride systems behind flying theaters

The development and media of flying theaters

by Joe Kleiman

In 2001, Disney introduced a new kind of simulator adventure as a flagpole attraction at the new Disney's California Adventure park at California's Disneyland Resort. Guests encountered a fully themed environment stretching from a mountain airfield outside the building themed as a hangar, through graphics depicting the history of California's aviation industry in the queue, and a pre-show with a flight captain preparing his passengers with a safety spiel. Once on board, the rows of seats rose up over a giant dome screen. Passengers, legs dangling, glided over the state of California, smelling the seas and the orange fields, the wind blowing in their hair.

The flying theater had been born. "Soarin' Over California" proved so popular that Disney brought it to Walt Disney World in

Orlando, adding two theaters to house the show at Epcot where, as one of the park's highest-attended attractions, a third Soarin' theater is being added to open this year.

In fact, 2016 is the year Soarin' is goin' global at Disney parks. A new, internationally themed version, "Soarin' Over the Horizon" will have its world premiere this season, first at the new Shanghai Disneyland, and shortly thereafter at Disney's American parks, as "Soarin' Around the World" (as the new version is titled outside of China). A fourth Soarin' location was recently announced for Tokyo DisneySea.

As the popularity of Soarin' grew, ride manufacturers, creative teams and attraction operators stepped up to build on the trend

准备启航

文：乔·克莱曼

2001年时，加州迪士尼冒险乐园推出了一个新的飞行模拟设施作为主打焦点。影院内，座椅在空中，底下是一个巨大的拱顶萤幕，乘坐的人，脚悬空，俯瞰加州各地景点影片，特殊效果加上气味和风的感觉，让人误以为真的在空中飞翔。

飞行影院就此而生，「飞越加州」大受欢迎，迪士尼因此将它引进到奥兰多的华特迪士尼世界。

今年，「飞越」将进入全球各地。新版的「翱翔·飞越地平线」将在上海的迪士尼乐园举行首映，然后是迪士尼美国乐园。根据公告，第四个飞越游乐设施会设置在东京的迪士尼海洋。

随着「飞越」欢迎度的提升，各地制造厂商、创意设计团队和营运团队就顺势推陈出新。有的设计成景点目的地，有的被放在主题乐园中，有的则落坐在零售中心里。各式各样的骑乘系统、自由发挥的空间、影院配置、特效、风格和故事情节等等，使每个设施都独具特色，除了拥有精密的技术，还各自完美成一体，而这些都有赖团队的合作和创意。

「飞越加州」的展演总监瑞克·罗斯柴尔德〈Rick Rothschild〉认为飞行戏院吸引人之处在它独特的形式，他说：「穿越非常特别的地方，不管是已知或不知的地方，原本就有的感动，再加上实际飞行的感觉，那种离地自由自在的感觉，就是为什么「飞越」这游乐设施是佛罗里达最受欢迎的景点。」

我们参观了几个新的飞行影院，有八月即将在西雅图上场的「展翅穿越华盛顿」、去年四月在明尼阿波利斯开放的「飞越美国」，还有秋天会在菲律宾圣罗莎开幕的「阿吉拉航班」。我们也看了一些新的、即将面市的飞行影院资讯。

展翅飞越华盛顿州

与最初的「飞越加州」相似，八月即将开幕的「展翅飞越华盛顿州」，是向华盛顿州的自然人文风光致敬。但与乘坐模拟飞行机的感觉不同，这故事场景带给人的是坐在树梢上观赏星空的错觉，这错觉一直持续到美洲原住民的神奇魔法将大家升到空中。

这个景点位在57号码头，57号码兴建于1897年，作为矿工着陆处。当时，从阿拉斯加来，承载黄金的船只都是先在西雅图登陆的。老板是格里菲斯家族，格里菲斯家族是当地著名的餐馆老板，想打造独特的景点来搭配码头上的摩天轮，于是找上了新媒体制作公司—超级78工作室〈Super 78 Studios〉，超级78工作室的负责人蒂娜·本娜东〈Dina Benadon〉和布莱恩特·杨〈Brent Young〉为飞行戏院提供了完整的规划，包括排队、映前秀、主影院、及所有的媒体制作等等都有规划。他们也监督整合其他厂商的合作成果。

故事地点设在华盛顿州奥林匹克国家森林。映前秀区设计成护林员小木屋，可容纳三十三人，具有美洲原住民元素，如面具、WPA风格海报等等。当灯光变暗，海报升起时，现出了窗户—其实是萤幕，萤幕上有一位护林员，给予导言和讲解安全注意事项。由加纳·霍尔特制作公司〈Garner Holt Productions〉制作的面具，就开始说着原住民方言，营造气氛，增加旅程真实感。

在影院内，游客看到的是树梢和夜空，那是三个紫外线壁画结合在一起造成的错觉，壁画来自华盛顿州的夜空景象，由GP色彩成像公司〈GP Color Imaging〉设计和作色彩校正完成的。「在另外一个景点，我们用照明效果来制作星空，对我而言，那不够真实。布莱恩特·杨解释说：「感觉像是disco。」

当夜空开始消逝时，座椅升到空中，支撑一排排座椅的木板翻转过来变成飞行机的棚盖，飞行机



in various ways. Flying theaters have appeared around the world. Some are operating as destination attractions, some within theme parks, and some in retail centers. They employ a variety of ride systems and degrees of freedom, theater configurations and in-theater effects, cinematic styles and storylines. Each is unique, highly integrated, technically sophisticated and dependent on close collaboration and creative teamwork for its success.

Characteristically, the flying theater utilizes an elevated seating platform, a partial dome screen and a customized AV and show control system. Riders hang suspended above a partial dome screen, able to see the action below, to the sides, and ahead toward the horizon. The screen is often truncated towards the top. Riders do not feel attached to a ride vehicle and begin to feel as if they are actually flying.

Rick Rothschild, who at the time as Senior VP – Executive Show Director at Walt Disney Imagineering, had been the Show Director on Soarin' Over California – described the appeal of flying theaters. "There's a raw response to flying over extraordinary places both known and not known, combined with a sense of actually flying, free from the Earth. This is why

Soarin' Over California is one of the most popular attractions in Florida." Rothschild started his own company, FAR Out! Creative Direction, in 2008.

We explored a number of new flying theater attractions emerging on the landscape: Wings Over Washington, opening in Seattle this August; FlyOver America, opened in Minneapolis in April; Agila's Flight, opening in Santa Rosa, Philippines this fall. We also looked at a new, turnkey flying theater package just coming on the market. Each offers a cohesive, themed experience from the queue through the pre-show and the ride itself. Each takes advantage of current digital technologies.

Wings Over Washington

Seattle's Wings Over Washington, opening in August, is designed to give guests the illusion they're up in the treetops on a platform looking at the stars – that is, until a bit of Native American magic lifts them up into the sky. The attraction sits on Pier 57, built in 1897 as Miner's Landing, where the ships carrying gold from Alaska first arrived in Seattle. The pier is geographically at the center of a city plan to replace an elevated highway with a waterfront esplanade that will increase both tourist and local traffic.

The property's owners, the Griffiths, are a famed local family of restaurateurs. Seeking a unique attraction to join the giant observation wheel they had installed on the pier, they approached Super 78 Studios, owned by Dina Benadon and Brent Young. Since the wheel already gives a bird's eye view of Seattle, only one type of attraction could take their guests higher and farther.

The Griffiths knew they wanted a flying theater. Kyle Griffith, who is guiding the project with his father Hal, said, "Our vision was for

(L): Artist rendering of theater at Wings Over Washington. (R): Filming a sequence for the attraction *photos courtesy Super 78*



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Film producers utilize Super 78's Mushroom VR system to preview ride sequences out in the field *photo courtesy Super 78*

an attraction that tells a thrilling and visually spectacular story about the physical beauty, history and culture of Washington. Super 78's team created a complete experience that brought the vision to life, from the moment the guest walks in the door all the way through the exit."

Wings Over Washington ties in thematically with a key design brief of the new Seattle waterfront: to link the city's natural history and Native American and maritime heritage with today's commercial and recreational opportunities.

As guests enter the 5-story building, a vast, topographical map of Washington State carved of wood lines one wall, part of the rustic theme throughout the attraction that pays homage to the state's history and that of the pier. Audio and lighting cues highlight the points of interest that will be visited on the flight. On the opposite side of the room sits another wooden topographical map, this one highlighting the native tribes and reservations of the state. Guests proceed upstairs to the preshow and main auditorium.

The story is set in Washington's Olympic National Forest. The preshow area holds 33 and is designed as a ranger's cabin, with Native American design elements, including masks, and WPA-style posters. Lights dim and the posters rise up, exposing windows – actually video screens - on which a ranger appears and gives introductory information. The masks, built by Garner Holt Productions, articulate and vocalize to guests in rhythm with the musical score by Yessian Music, composer for the entire attraction.

As they sit and pull tight their safety belts (it is windy up in the treetops, after all), guests can see the forest and the night sky all around them, an illusion created through a combination of three ultraviolet murals of the Washington night sky devised and color corrected by GP Color Imaging.

The night sky begins to disappear, the seats rise up into the air and the wooden panels backing each row flip over to become canopies on the flying vehicle from Dynamic Attractions.

A totem pole with an eagle on top appears; the eagle magically becomes real and flies into the Washington sky, with the riders flying alongside. Soon, they are flying over well-known Washington landmarks, including a football game at the University of Washington, hot air balloons and wine grape fields in Walla Walla, and orcas in the San Juan Islands during the 5 ½ minute film. Each of these scenes drew on the visual effects acumen of Super 78's team with other providers including Zoic.

The crew was denied permission to film over Husky Stadium on the University of Washington campus during an actual game. The solution was to film an empty stadium and digitally add not only a football match in progress, but thousands of cheering fans in the stands. Super 78 was able to work off the original architectural plans for the stadium for accuracy.

With its proprietary Mushroom VR attraction design software, Super 78 was able to send virtual 3D mockups of the different sets, complete with media composited in, to the client during the design phase. The client was kept up to date on the production through viewings via an Oculus Rift VR headset that shared the media in a fully composed 360 degree environment.

Young had previously filmed two flying projects for OTC's Happy Valley parks in China (see "China Cinema," InPark Issue 41). "There were two big differences between that project and this one," Young remarked. "On this one, we weren't just making the film, we had full creative control of the entire project, and that made a huge difference in everything thematically coming together. Also, on Wings Over Washington, new technology meant we had a lot less gear, which freed us up creatively and of course, Mushroom helped me during the filming process."

By creating a grid within Mushroom VR for the half-dome screen used in the ride, Young was able to pull the memory card directly out of the RED Epic once the helicopter or drone had landed and place it in a computer to view the newly captured footage as if he were in the theater on the ride.

Super 78 also devised methods for dealing with sound issues unique to the dome theater configuration. As the attraction uses a Christie 4K 6p laser projector mounted to a crossbar in front of the ride vehicle, it was important to minimize light loss. "Light loss tends to be around 30% on a perforated screen," explains Young. "Our solution was to pinpoint where the individual speakers were to be located and then have Phoenix Rising, the firm responsible for the 39-foot diameter screen, create thousands of micro-perforations in the shape of kidney beans in front of each speaker. The rest of the screen remains solid."

是动感景点公司〈Dynamic Attractions〉生产的。萤幕上出现图腾柱，图腾柱上有老鹰，那老鹰在观众眼前奇迹似的活了过来，飞上空中，与乘客一同翱翔。很快的，在五点半钟的影片内游客穿越了几个著名的华盛顿景点，包括华盛顿大学的橄榄球赛、热气球、雅克玛的酿葡萄酒园，还有圣胡安岛的虎鲸。

这些场景充分利用超级78工作室的电脑绘图技术。虎鲸场景的拍摄是，以直升机作为摄影平台，当直升机接近圣胡安岛的灯塔时，把租来的赏鲸船开到定位拍摄的。之后，在后期制作时，加入了一群动画虎鲸，在乘客旁游动，其中一只更从眼前跳跃而过。在雅克玛场景中，增加了气球，也增添了照明效果。

超级78工作室借着专有的Mushroom VR景点设计软体，可以在设计阶段就把几组虚拟的3D画面媒体传送到客户处。客户可以使用Oculus Rift VR 头戴式显示镜来观看360度3D 内容，掌握最新制作进度。

布莱恩特·杨之前为中国华侨城集团的欢乐谷拍摄两个作品〈杂志InPark 第41期“中国电影院”〉，他解释说：「这个作品和中国的作品有最不一样的两点是，这次我们完全掌控了整体的制作设计过程，不只是拍摄影片，所以主题连结的很好；制作「展翅飞越华盛顿」时的新技术让我们更能自由地发挥创意。」

超级78工作室继续其他的飞行戏院制作，布莱恩特·杨说：「我们乐于和客户和其他厂商合作。」

飞越美国

位于迷尼苏达州明尼阿波利斯市的美国商城〈Mall of America〉最近新添了一项新的娱乐设施，这是由加拿大的渥太华飞翔冒险公司〈Soaring Ventures of Vancouver〉所盖的第二座飞行影院。与「展翅飞越华盛顿」不同的是，这个设施没有随着一个故事情节在进行，较像是一场冒险记。

「飞越加拿大」在2014年在渥太华启航，制作公司是翱翔景点〈Soaring Attractions〉，在打造「飞越加拿大」时，翱翔景点就已经在构思建置第二影院的地点。总经理斯蒂芬·格迪斯〈Stephen Geddes〉说：「我们想要找一个客流量高，有当地和外来旅客观光的地方。我们考虑过纽约的时代广场和旧金山的渔人码头，但都因场地空间问题而作罢。」

与打造「飞越加拿大」时相同，「飞越美国」也请FAR Out! 创意指导公司〈FAR Out! Creative Direction〉的瑞克·罗斯柴尔德任展演总监。以戴夫·莫索普〈Dave Mossop〉为导演，由自家工作人员自行拍摄，总经理斯蒂芬·格迪斯和董事长执行打造景点。摄影师约翰·特拉普曼〈John Trapman〉和作曲家雅各布·悦华〈Jacob Yoffee〉也参与了这个制作。

「飞越渥太华」位于较传统的购物空间内，自成一体，硬体设施是原先在86世博时所建置的IMAX 剧院，再加以改造而成的，因此在设计和流动上都受到限制。

「飞越美国」设在购物中心里，与其他的娱乐设施，如色彩亮丽的尼克迷失主题乐园相邻。选取的地点原本是作为现场表演的剧场，附属于另一个老旧的主题乐园，购物中心无法充分使用它，就把它夷为平地，当它被夷为平地后，翱翔景点团队就重新建盖可行的建筑物。「飞越美国」没有叙述性的故事情节，所以在潜意识里为游客作前提准备就变得非常重要，为达成此目的，从建筑外观、排队处到映前秀区，都看得到飞机的动机和美国的图像。

主要的排队空间是一个加长的长方形场地，萤幕沿着两面长墙排开，每个萤幕都是五十英尺宽，从天花板延伸下来五又二分之一英尺到头部高度的地方，它们像美国国旗在风中飘扬般呈现波浪状。瑞克·罗斯柴尔德说：「这个空间的概念，是让游客先熟悉即将拜访的六个地区。在非常忙碌的日子里，他们可能只看的到一半的影片，这样旅客就有理由再回来玩，看错过了什么。」

接着，一次六十二人可以进入启航前等候区，那是一个巨大、有三楼高的中庭，一边有楼梯和



This scene from FlyOver America takes guests to the expansive Western USA *photo courtesy Soaring Attractions*

AV integrator Electrosonic installed binaural speakers to the rear of each canopy, providing a two-in-one solution. As the canopy is folded over during the seating process, the speakers are housed under the chairs and emit the sounds of animals moving through the trees and the forest below, but once raised, they become personal rear channels for each passenger.

Super 78 reports being engaged on a number of flying theater projects currently in development stages.

FlyOver America

Inside the Mall of America in Minneapolis, Minnesota, a new entertainment offering, FlyOver America has been added to the mix of attractions and retail. This is the second flying theater attraction built by Soaring Attractions of Vancouver, Canada. In contrast to Wings over Washington, the attraction does not follow a narrative storyline, but is rather a more lyrical, immersive themed adventure.

During the development phase of its first flying theater attraction, FlyOver Canada, which opened in Vancouver in 2013, Soaring Attractions was already considering locations for a second flying theater. "We wanted something that would have both a high degree of foot traffic and a good mix of locals and tourists," says Stephen Geddes, President of Soaring Attractions.

As with FlyOver Canada, Rick Rothschild of FAR Out! Creative Direction, whose clients include Walt Disney Imagineering AO&A and Thinkwell Group, served as creative director, with Dave Mossop reprising his role as film director. The film was shot by an in-house crew, with Geddes and Soaring Attractions

CEO Andrew Strang executive producing the attraction. Joining the team were cinematographer John Trapman and composer Jacob Yoffee.

There were differences of location and physical space from one FlyOver to another. Vancouver's is a standalone attraction within a popular downtown destination, Canada Place Pier, and a retrofit of an existing structure originally built to house a giant screen theater at Expo 86. Preexisting limitations were in place regarding the flow and design of the attraction.

FlyOver America is in an immense mall with other entertainment offerings adjacent, including a colorful Nickelodeon theme park. Architecturally, the spot chosen held an underutilized, live performance theater; that building was razed, and the Soaring Attractions team was able to work from scratch on devising a new structure and guest experience.

As FlyOver America is designed as an immersive, visceral adventure, not a narrative, rather than have a "first chapter" preshow, it was important to subliminally prepare guests for the main ride. With a theme park so close by, Rothschild also saw the need to create a deliberate transition. "We had to decompress our guests from the cacophony of the Nick Universe space," he said. To accomplish these goals, the exterior architecture, queue, and preshow zones all are heavily invested with the paper airplane motif of the attraction, imagery of the US, and the sense of motion. "We're giving the idea to our guests that they're going to fly into the sky and see America."

走廊连接到影院，另一边有从地上到天花板大小的「飞越美国」飞机飞入云层的大壁画。瑞克·罗斯柴尔德说：「在三扇门上方的壁画中间，有一个七公尺宽和五公尺高的萤幕，是艺术家玛格丽特〈Magritte〉设计的，作为入口。萤幕上有飞机飞上云端的动画，我们另有五台实体纸飞机在那空间中移动。」

「飞越美国」影片长达八分钟，从云端开始，在外太空中结束。瑞克·罗斯柴尔德说：「我们一直仔细寻找好看的云来拍摄，影片从东方的缅因州开始，在美国本土划个十字后，来到西方的夏威夷，总共涵盖六个地区。最后两个镜头是美国著名的两大地标，先是金门大桥，然后是自由女神。」他接着说：「我们很幸运，我们的起点，缅因的海岸边的灯塔上有一面美国大国旗在旗杆上飘扬，而最后一个镜头，当我们越过自由女神后，又看到美国国旗。刚好与我们在排队处和放映前等待区所呈现的主题相互辉映。」

台湾的智崙科技公司供应飞行乘坐机和萤幕，主体达六十英尺直径大，有四楼高。在翱翔景点公司人员埃里克·桑贝尔〈Eric Sambell〉的监督下完成影音的整合，影院中使用一台Christie 4K的放映机。与布莱恩特·杨在打造西雅图飞行影院时相同，瑞克·罗斯柴尔德在「飞越美国」也遇到影院后方频道的问题，他解释道：「喇叭的位置跟西雅图的一样，一样安装在圆顶后方。但我们在「飞越美国」作的调整是将一对立体喇叭藏在座椅的网状靠背后方。当喇叭安装在影院的后方时，声音离的很远，那现在我们修正后，声音就在乘客身旁。」

和「飞越加拿大」一样，瑞克·罗斯柴尔德也为「飞越美国」制作了一个节庆版本，在这版本中，由乘客来寻找圣诞老公公走失的精灵。他说：「是一样的乘坐体验，只是罩上了动画和换了结局，我们不再飞到外太空俯视美国，相反的，我们飞到了北极。希望完全不同的新内容不会使曾来过的游客却步。如果你不曾来过，想来，你经历的仍是「飞越美国」；如果你曾来过，那你现在经历的就更多了。」

阿吉拉航班

在世界另一端的，位于菲律宾的圣罗莎的魔法王国游乐园〈Enchanted Kingdom〉正在打造以老鹰为主题的飞行影院。老鹰是菲律宾的标志，在菲律宾他加禄语里，阿吉拉就是老鹰。

游乐园的总裁是马里奥·马蒙〈Mario Mamon〉，他以前担任过IAAPA的总经理，在游乐园二十周年庆时，他声明，单靠飞行影院，每年就会多出一百万名游客，这会让魔法王国成为亚太地区排名前三十游客最多的游乐园。

在原始构想中，老鹰阿吉拉是景点的主角，用翅膀上乘载游客飞越菲律宾。但在开始着手制作时，马里奥找来设计工作室追溯〈Retroactive〉，结果增加了故事情节，也塑造了背景故事。

追溯工作室的创意总监兼联合创始人史蒂夫特·罗布里奇〈Steve Trowbridge〉说：「我们决定用巫师埃尔达来做这个景点的导游，埃尔达是魔法王国游乐园的吉祥物，二十年前设计出来的，但从来不曾任任何一个景点里重要角色。」现在，这个大众皆知的角色将担任导游，把这新景点和游乐园连结起来。

追溯工作室设计的情节围绕在三个能量水晶上，这三个水晶的责任是维护菲律宾的自然生态。当游客排队前进时，他们会经过三个呈现在强制透视窗的图像，图像中水晶，水晶中有用背面投影出来的影像，暗示水晶所代表的事物。借着墙上其他的效果和标志，故事内容就次展开。史蒂夫特·罗布里奇说：「我们排队区灵感来自迪士尼睡美人城堡，求达简单但强烈的效果。」

接着，游客会进入映前秀区，映前秀区造成如森林般，使用霍洛维斯〈Holovis〉公司提供的技术，电脑生成的3D影像埃尔达出现了，他告诉大家赋予每人权利的重要性，因这样才能让阿吉拉和其他生物，包括人类能有安全的地方生活。然后，埃尔达飞越而过，神奇地出现在登机入口上方，提醒游客任务的风险，也赋予大家飞的能力。史蒂夫特·罗布里奇说：「不搭乘老鹰的翅膀，但与老鹰一起飞翔，对我们来说，是很重要的。」

Construction continues inside the theater for Agila's Flight *photo courtesy Rhetroactive*



The main queue room is an elongated rectangle. Screens line the two long walls, each measuring 50 feet long and stretching 5 ½ feet from ceiling to head height. They undulate as an American flag in the wind. "Each of our regions is given a 3 ½ minute visual chapter that speaks to its aspect and breadth," Rothschild explains, "The images are taken from the ground. We concentrate on three things – architecture, geometry, and people – of each region, and regional tunes play against each of the visual segments." The video comprises a 22-minute loop, with guests averaging 12-13 minutes in the space. "On the busiest days, they'll likely only see around half of the loop, so it gives them an opportunity to return and see what they missed."

Sixty-two guests at a time enter the pre-launch area, a massive, three-story atrium with the stairs and balconies leading to the theater on one side and a huge floor-to-ceiling mural of the FlyOver paper airplanes soaring into clouds on the other. The lights dim and the safety video begins. "We had this huge space and we wanted to do something unique," said Rothschild. "We took our cue from the creative airline safety videos that you now see in air travel. As we're focusing on these different American regions, we decided to produce a music video, with different portions highlighted by different American regional music styles." Motion 117 Productions of St Paul produced the video, with music produced by 6° Studios of Calgary, Canada. "We're fortunate that with Minneapolis being such a strong theater and ad agency town, we had a lot of creative talent available for both production and performance."

The 8-minute film begins in the clouds and ends in space over the Earth, viewing the entire US. "We were always on the lookout for neat looking clouds to film," says Rothschild. "The final two locations are what we consider the two iconic entryways to the US – the Golden Gate Bridge, followed by the Statue of Liberty," he adds. "We were fortunate that in our first location, the lighthouse off the Maine coast, there was a giant American flag flying on a flagpole, and then for our last shot, as we cross

over the Statue of Liberty, there's another giant American flag, reinforcing our theme."

Brogent supplied the ride vehicles and dome screen, which is 66 feet in diameter and four stories tall. A/V integration was handled internally by Soaring Attractions, under the supervision of Eric Sambell. A Christie 4K Roadie projector is used in the main theater.

As others have, Rothschild has come across challenges with the rear audio channel in designing flying theaters. He employed on-board speakers. "The speaker locations behind the dome are the same as in Vancouver," he explains. "Our big adjustment for FlyOver America is that each seat now has its own pair of stereo speakers hidden behind the mesh seatback. When speakers are mounted behind you in a theater, the sound is way behind you. We've fixed the issue by having the rear channel ride with you. Along with using them for sound effects, we were able to use these channels to bring the musical score off the screen, and we've improved the audio experience and made it more immersive."

As they did with FlyOver Canada, Soaring Attractions engaged Rothschild to help create a holiday version of FlyOver America, where riders will search for Santa's missing elves and enjoy an additional 92-second journey to the North Pole. "It's the same film experience, except we overlay animation and provide a new ending. If you've never seen it before and want to, you're still experiencing the FlyOver America you were expecting. And if you have ridden before, you can now enjoy it with a little something extra."

Agila's Flight

On the other side of the world, in Santa Rosa, Philippines, Enchanted Kingdom will soon open a flying theater with a conservation theme featuring the country's national symbol, the eagle (agila in the native tongue Tagalog). Agila's Flight (working



AGILA'S FLIGHT – ENCHANTED KINGDOM
SANTA ROSA CITY, LAGUNA, PHILIPPINES



SIMPSONS SPRINGFIELD – UNIVERSAL STUDIOS
HOLLYWOOD, CA



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DISCOVERY ADVENTURES
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name) represents the first major component of a five-year park expansion scheme. The goal of the new theater is to place Enchanted Kingdom on the international tourism map while providing an important and inspirational message to the more than 100 million residents of the Philippines.

Park Chairman and President Mario Mamon, a past president of IAAPA, forecast during a 20th anniversary celebration of the park that the new flying theater alone would pull in an additional million visitors per year, placing Enchanted Kingdom in the top 30 parks for attendance in the Asia-Pacific region.

The original concept had the eagle Agila as the central character, with riders soaring over the Philippines on its wings. Once production was underway, however, Mamon approached boutique design studio Rhetroactive to enhance the storyline and create a backstory for the attraction.

"We decided to feature Eldar the Wizard, Enchanted Kingdom's mascot. Eldar was designed 20 years ago, but never had a strong presence inside an attraction," said Steve Trowbridge, Creative Director on the attraction for Rhetroactive and co-founder of the studio. Now, the well-known character would act as guide and link the attraction with the rest of the park.

The storyline Rhetroactive devised revolves around the beauty and power of water, earth and air – the three essentials of Agila's natural habitat. The guest's role is to seek out these elements and restore their power. As guests proceed through the queue, they walk past three vignettes presented in forced perspective windows, each housing a crystal that contains the essence or soul of each element, symbolized in rear-projected images. Through additional effects and signage on the wall, the story unfolds gradually as guests proceed through the queue line. "We strove for a combination of simplicity and strong impact," says Trowbridge.

Guests next pass into a pre-show room mocked up as an enchanted forest. Here, using technology provided by HoloVis, Eldar appears via a fully realized 3D effect as a CGI character. He explains the importance of everyone being empowered so that Agila the eagle and all creatures, including humans, will have a beautiful place to live. Eldar then flies across the room and magically appears above the doors to the pre-board areas, reminding guests about the mission as he grants each the ability to fly. "It was important for us," Trowbridge points out, "that we were not riding on the back of the eagle, but instead were flying with it."

Trowbridge and his team wanted the concept of the three crystals to continue within the ride as a participatory experience. To that end, each guest receives a color-changing RF wristband, which interacts with the action on the screen. He explains that "This empowers the guests to connect with how their actions

and behavior can influence the film. It produces a huge impact at low cost."

The ride takes place inside a 105-seat Simex-lwerks SkyRide theater, one of the largest flying theaters installed, which, like FlyOver Canada, uses a 4K Christie Roadie projector. "On the busiest of days," says Trowbridge, "the attraction can be turned around four times, with an hourly throughput of 420 people."

The 6-minute film, directed by Manila-based Central Digital Lab, concentrates exclusively on the natural beauty of the Philippine islands and humans enjoying the natural world. The vast, 30-meter x 12-meter screen is flat with a slight curve (as one would find in a traditional giant screen theater) and mounted against one side of the auditorium, providing filmmakers the opportunity to include an underwater scene with turtles, rays, and scuba divers one would typically not expect to see in a theater with a dome screen beneath riders' suspended legs. Note that unlike the other flying theaters described here, this one utilizes a flat instead of dome screen.

The musical score was composed by popular composer Ryan Cayabyab, known throughout the Philippines as a judge on several music competition TV shows, and for bridging the cultural gap between classical and modern pop music in the country.

Drone technology was essential to the new ending Rhetroactive created for the film. Trowbridge explained how. "In the original concept for the attraction, you took off over the Philippines and then landed at the park gate, without much fanfare. Those shots were filmed using a crane. We took an eight-mast drone with a 6K RED Epic camera attached and filmed a new ending at the park – a celebration of the Philippines, featuring 300 dancers and 700 extras. We would not have been able to do that without a drone strong enough to carry that camera."

A primal experience

Fifteen years after its introduction by Disney, the flying theater has proven itself to be a versatile attraction, allowing riders to experience the world in a way they never could on solid ground. Flying theaters have a place among the family of observation attractions that are so popular nowadays, providing the experience of flight without actually taking passengers into the sky.

"The urge to fly is something everybody shares," explains Brent Young. "It's a dream we all have. And we feel like we are so close to being able to do it. We jump on trampolines, ride roller coasters, do all kinds of things that approximate that sensation. Flying theaters are primal wish-fulfillment no matter how old you are or where you're from."...

影院有一百零五人座，是加拿大的西蒙克斯—艾沃克斯公司〈Simex-Iwerks〉推出的，叫“天空之翼〈SkyRide〉”。与「飞越加拿大」一样，使用4k Christie Roadie的放映机，史蒂夫特·罗布里奇说：「在最忙的日子里，这设施每一小时翻转四次，共有420人搭乘。」

马尼拉的中央数位实验室〈Central Digital Lab〉所执导的阿吉拉影片，为时六分钟，内容主要集中在菲律宾岛屿的自然美丽风光和徜徉在其中的人民，这与「飞越华盛顿」和「飞越美国」的内容不相同。

追溯工作室设计的新结局，拍摄过程必须倚赖无人机科技，史蒂夫特·罗布里奇解释道：「在原来的构想中，你启航飞越菲律宾，然后在游乐园门口降落，没有大张旗鼓的场面，镜头是使用起重机来拍摄的。我们拿一架无人机，附上一台6K Red Epic的摄影机来拍摄新结局，新结局是菲律宾庆典，场面有300名舞者，再加另外700人，如果没有那架抬得动摄影机的无人机，我们就无法完成。」

展翅和飞越独特的音响解决方案

虚拟飞行机常见的一个问题是扬声器往往被放在影院后方，而那从后方传来的声音，给人很不真实的感觉。瑞克·罗斯柴尔德和布莱恩特·杨两人各自为此提供了解决妙方，瑞克·罗斯柴尔德请「飞越美国」的台湾厂商志威科技将双声扬声器装在椅背里。在「飞越华盛顿」，电音公司〈Electrosonic〉则是将双声扬声器装在棚盖的后面，在入座过程时，棚盖收起，扬声器刚好位在座位下，发出动物穿过树林的声音，一旦升起后，就变成个人后座音响。

对超级78来说，前方扬声器也有问题，一般而言，扬声器不是安装在无孔不透声萤幕的周围，就是在有孔透声萤幕的后面。当知名品牌Christie 4k 6p的激光投影机被安装在飞行机前面的横梁上时，维持最低限度的光损失就变得很重要。布莱恩特·杨说：「在透声萤幕上光损失大约是百分之三十，我们的解决方案是找出每一个扬声器的位置，然后请负责我们萤幕的起飞·凤凰公司〈Phoenix Rising〉在扬声器前制造数千个腰豆状的细微小孔，剩余的部分就用无孔的不透声萤幕。」

天际无限

在「飞越加州」推出十五年后的今天，世界领先的设计师仍继续不断的发展独特而创新的方式来展现世界各地风光。下个航程会带我们去哪里呢？飞越哪里？又是什么样的历程呢？天际是无限的。



A crew films the entrance to Enchanted Kingdom for Agila's Flight photo courtesy Rhetroactive

Ride Systems of Flying Theaters

by Kevin Dazey

Part giant screen cinema, part motion simulator, part 4D theater: The flying or suspended theater allows riders unobstructed views of sweeping landscapes or perhaps a more thrilling mission with a superhero or other storyline. In these theaters you will find seating layouts a bit more out of the ordinary than your typical stadium seating at the local cinema. Vertically stacked or steeply raked seating arrangements allow guests' legs to dangle for that ultimate sensation of flight. Mix in seat motion and add cues such as wind, scent, or water spray for a more complete sensory overload. We looked at four systems from four different providers, each with their own take on achieving the wow factor. The basic challenge: remove the floor and place viewers in the middle of the action.

Dynamic Attractions (Wings over Washington)

With plenty of experience in this style of attraction, Dynamic Attractions brings their True Flight Motion and tilting load platform concept to venues around the world. The basic operating principle of their Flying Theater involves a single level load platform which has a load/unload benefit as George Walker, VP Creative Development explains. "Because our loads like a theater, guests just intuitively know what to do."

When the show begins the entire load platform rotates 90 degrees along with riders' seats pivoting. Walker described the inspiration behind this transition effect. "Our approach recreates the sensation that one would feel if they took a running jump off a cliff and then began to hang-glide from there. This leaping configuration causes that little sensation that makes the hairs on your neck stand up. It makes the experience exhilarating."

Electric motors control the action, beginning with the tilt, then the upward/downward heave which has been tweaked over time. "The ability to flutter and fluctuate the motion is also better than ever before," says Walker. "This gives us the ability to really synchronize the sensations with the show on the screen."

With multiple ride systems currently in operation and several more on the way, Dynamic Attractions is already looking to the future. "We are exploring many different configurations, new interactive technologies, viewing angles, and different motion profiles coupled with content to deliver physical sensations that push the envelope and go way beyond mere flying sensations," says Walker.

SimEx-Iwerks (Agila's Flight)

Also having claim to history with a considerable range of flight and simulator attractions is SimEx-Iwerks, their latest offering dubbed SkyRide. In this setup, guests find themselves at one or more levels for boarding. Stephen Li, Sales Support Manager at SimEx offered the fundamentals. "SkyRide flight system is designed with 1 to 3 vertical tiers of seating, each with drop-away flooring and railing to produce an unobstructed view of a large screen. This method was chosen to accommodate smaller venues and to eliminate building ceiling height restrictions."



Motors are installed on a Dynamic Attractions flying theater platform
photo courtesy
Dynamic Attractions

A menu of 4D effects is included with each five-seat vehicle base where no additional support is necessary. Electric motors power the seat motion to provide three degrees of freedom. "Over the years SimEx-Iwerks has developed multiple hardware platforms which when matched to a custom travelogue film, gives the rider a single point of view flying experience specific to a client's destination location."

The motion seats are fabricated in Canada and installed on site. Flying attractions are about serenity and gentle swooping motion, but Li mentions SkyRide can have varying - and more intense - ride profiles besides simulating flight - "programming flexibility allows for both smooth and more aggressive ride profile as the film demands" - good news for those who enjoy more thrilling ride action.

Brogent & Vekoma (FlyOver America)

The i-Ride flight simulator hardware brings another variation to the giant screen/motion theater idea. i-Ride features motion base vehicles driven by electric motors, 4D effects, and is a collaboration between Brogent Technologies and Vekoma Rides. Brogent utilized experience with flight simulator technology to develop and manufacture i-Ride, while Vekoma handles marketing and sales. "The core design concept patented by Brogent has evolved since the prototype unit," comments Stefan Rothaug, Senior Marketing Specialist at Brogent. "The ride system consists of modular 6-DOF motion base gondolas accessible from different floors."

飞行影院的承载系统

文：凱文·達奇

飞行影院和悬吊影院的电影格式和动态模拟器，让游客可以一览无遗的欣赏山水风光，或是和超级英雄一起执行惊险任务。你会发现这些影院的座椅布局和一般电影院的不同，垂直堆置或极度倾斜的座位设计，让游客搭乘时双脚悬空，再运用会动的座椅、风、气味和水雾等来达到更终极的感官体验。乘骑游乐设施的设计师各自以自己的方式来达到令人惊叹的效果，但基本目标：除去地板，使观赏游客身历其境。

对这类游乐景点的设计，动感景点〈Dynamic Attractions〉这家公司已有很多的经验，他们将所设计的模拟机“真实航行动感〈True Flight Motion〉”和倾斜承载平台的概念带到世界各景点。它的基本操作原理是使用单一的承载平台，单一平台有助于装卸载乘客，创意部门副总裁乔治·沃克〈George Walker〉解释道：「因为像电影院，乘客一看就知道该怎么办。」当秀开始时，整个平台带着椅子翻转九十度，这过程很有效果。「这让乘客有从悬崖边跳下，接着开始滑翔的感觉，那跳跃过程会让乘客脖子上的汗毛都竖起来，我们知道这是最好、最令人振奋的体验，而我们的设计就是建立在这上面。」由电动马达控制，从斜倾开始，然后是向上向下运作，这些都经过很多的改良。「摇动或上下波动的状况也比以前好太多了，这让我们有能力提供乘客与萤幕影片同步的感官刺激。」已经有好几个模拟机运作，有几个即将面市，动感景点公司开始观望未来，「我们尝试不同的构造、新的互动技术、视角、运动轨迹，配合内容，提供身体感官体验，挑战极限，超越单纯的飞行感觉。」

在飞行和虚拟游乐项目方面，另一家堪称历史悠久的公司是西蒙克斯—艾沃克斯〈SimEx-Iwerks〉，他们最新的飞行模拟器叫“天空之翼〈SkyRide〉”。在这个设计里，乘客会发现他们在高度不同的平台登机，销售支援经理斯蒂芬·李(Stephen Li)解说它的基本原理：「天空之翼系统有一到三层垂直排列的座位，每一层的地板和栏杆会脱离，乘客就可以无障碍的欣赏大萤幕。这个设计是为了迁就小场地和解决天花板高度限制的问题。」4D座位，不需要其他系统支援，配有三自由度转动，由电动马达来带动。「这些年来，西蒙克斯—艾沃克斯公司开发了多种硬体平台，配上量身订做的历险影片，依据客户指定的目的地，带给乘客单一焦点的航程体验。」即将在菲律宾魔法王国游乐园上场的是「阿吉拉」剧场，是西蒙克斯—艾沃克斯公司为此乐园特别设计的，使用的就是天空之翼。电动座椅先在加拿大制造，然后在现场装置。虽然「阿吉拉」是模拟飞行，但也可模拟其他不同的动感轨迹，斯蒂芬·李说：「程式设计很有弹性，让我们可以依据影片需要，提供较平缓或较刺激的动感。」

最新的 I-Ride 飞行模拟器又是不同的设计，渥太华的「飞跃加拿大」和最近在迷尼苏达开幕的「飞越美国」都是采用 I-Ride。I-Ride 是电动马达带动的动感机，有 4D 效果，是台湾的智崴科技 (Brogent Technologies) 和威克玛骑公司〈Vekoma Rides〉合作生产的。智崴科技对飞行模拟技术原有经验，于是研发和制造了 I-Ride，威克玛骑公司则负责行销，智崴的行销主任斯特凡·罗瑟格〈Stefan Rothaug〉说：「核心设计理念在原型机阶段时就有了，智崴拥有专利。这个系统每层都配有六自由度动作。」威克玛骑公司的北美行销副总裁内森·琼斯(Nathan Jones)说：「它可以设

"It can be configured to be mild or more dynamic/thrilling," says Nathan Jones, Vekoma Rides Vice President of Sales & Marketing, North America. "This is, however, to a large extent determined by content and what you want your audience to experience. Content and motion need to be in sync. i-ride is so agile that it can make the audience feel like they are turning/spinning around or even upside down!"

Once the show begins, vehicles project toward the screen and leave the floor behind, as Jones explains. "The motion carriers slide out into the dome screen. The units on the side are appropriately angled along with units on higher/lower levels which are tilted down/up to focus on the center of the screen. The extension of each platform is quite extensive and leaves any person in the audience fully immersed in the domed screen." More installations are already on the way around the world.

Falcon's / Oceaneering / Kraftwerk (Suspended Theater)

If you were at the IAAPA Attractions Expo in November 2015, you may have seen the Suspended Theater on show, a joint endeavor of Falcon's Creative Group, Oceaneering Entertainment Systems and Kraftwerk Living Technologies.

One of the essential features of the patented Suspended Theater is the concealment of the large screen during the load process. Utilizing single level loading, guests find their seats. Eventually the ceiling disappears, seats begin to rise, and the big picture is revealed (literally). The "suspended" part comes from an overhead frame that supports the seats below. A cable and pulley system elevates seats to a stacked arrangement for the final viewing position. Three degrees of freedom are capable along with other effects found in similar designs.

The visionary spark for this team effort came from Cecil Magpuri, president and chief creative officer of Falcon's. Clifford Jennings was the lead concept designer for Oceaneering for the mechanical designs. According to Matt Kent, head of creative services at Oceaneering, "Cliff is an avid modeler in his spare time, and he personally designed, built and programmed the fully-functional model we displayed at IAAPA."

Kent explained each company's role in the theater package. "Falcon's Licensing holds the patent for the basic operational intent of the Suspended Theater concept. Falcon's Treehouse, in most situations, acts as the lead Creative Designer, Media Producer and overall Show Producer for these attractions. Oceaneering is responsible for the design and engineering of the mechanical aspects of the ride system, performs the production, assembly, testing and commissioning of all of the moving components. Kraftwerk Living Technologies GmbH provides technical direction on A/V design and also provides all A/V hardware and software." ...



Kevin Dazey (dazey200x@yahoo.com) works in R&D at a manufacturing company and has a Bachelor's degree in Mechanical Engineering from Wright State University. He enjoys hearing the stories behind the rides and someday would like to transition to working in the attractions industry.

定为较温和或是较惊险的动感，但这就要依内容和希望乘客有什么样的体验来决定了，内容和动感需同步。I-Ride 非常机动灵活，它可以让乘客觉得在旋转，或是上下颠倒！」当秀开始时，动感机离地朝萤幕移动。内森·琼斯 解释：「承载机滑向穹幕，旁边的部分沿着上、下层一起向上或下倾，以对准萤幕中心。每平台都可以大幅延伸，让乘客使沉浸在影片中。」

美国的猎鹰的树屋公司〈Falcons Treehouse〉和海洋工程公司〈Oceaneering〉公司合作推出了悬吊影院，悬吊影院最主要的特色之一，是在装载过程时看不到大萤幕。以单一平台的设计装载乘客，空间的大小和动感模拟设施相当。最终天花板消失了，座位升起，大画面出现了。“悬吊”这名词的来源就是因座椅是用头上的支架支撑的，再使用电缆和滑轮系统将座椅拉起，堆叠排列成观看影片的位置。可三自由度转动，也有其他的特殊效果。海洋工程公司的创意服务部主管马特·肯特〈Matt Kent〉详细阐述了两公司的角色，他说：「猎鹰的树屋有悬空影院概念的专利权，所以扮演的角色是景点创意设计、媒体设计和节目制作。海洋工程公司是负责承载系统机械方面的工程设计，执行所有组件的生产、组装、测试和运行。」

Translations by Kai-i Tien (kaiitien@yahoo.com)



The Brogent and Vekoma ride system photo courtesy of Brogent



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A themed entertainment point of view

PGAV - 50 years young and still evolving

by Al Cross, VP at PGAV Destinations

Recently, I made an offhand comment to an industry insider, about 2015 being PGAV's 50th anniversary. I was in the middle of making a completely different point when he stopped me.

"Al, that means PGAV is absolutely the longest-standing firm in the business."

My memory raced through the people and companies I know. I started to suggest others, thinking perhaps there was another, but I realized - he might be right. Mulling this over led me to consider what things have changed in that time. The objective evolutions are obvious: our growth from four people to more than 120; the fact that my favorite pair of pants has become cluttered with a collection of clashing client logos; and that my golf game is worse, even with all my colleagues' advice during IAAPA's November festivities.

The most important of these changes is a simple one. It's our point of view.

Against the grain

PGAV set out to be a "mainstream" Architecture firm; but in truth, we were different from the start. Fred Guyton, our founding and most colorful partner, is a differentiator. That fundamental aspect of our nature is baked into our DNA. Our entry into conceiving attractions for large groups of people can be traced back to accepting a job for a "little bird garden." Another firm had rejected the assignment - it was out of line with how they saw themselves - it was at a time when most Architects generally condescended toward themed construction. But we took it. We welcomed what others resisted. We were always against the grain.

Initially, we approached our work from a client-service orientation, learning that time spent digging deep into how our clients thought, felt, and did business was a super-benefit to long-term relationships and our success. This too was grain grinding: we weren't swooping in to "rescue" our clients with brilliance, vision, and ready-made, intuition-driven solutions, then flying away in our private jet. (We did have a plane back



Riders aim for targets and avoid being splashed back
at Port Aventura. All photos courtesy PGAV.



Guests enjoy a water attraction and underwater viewing at SeaWorld's Aquatica park

then, and a helicopter. I never rode in them.) No, we listened, we learned, and we then helped craft great paths forward – together, resulting in bonds that lasted longer than Stan Musial's career with the St. Louis Cardinals.

The early connection-style led to early hallmark projects, Busch Gardens Williamsburg and Busch Gardens Tampa. Williamsburg, then referred to as "The Old Country," is certainly one the most beautiful theme parks in the world (at least that's what the National Amusement Park Historical Association said for more than two decades). That early opportunity ran heavily on intuition and the distinct talent of one of the industry's unsung and now most senior creatives, my friend Bill Castle. Like so many design firms, we leveraged the power of one or two individual visionaries.

Universal, Port Aventura: Always learning

But... we didn't yet know what we know now.

Circumstances then led us to being architects for Universal Studios Orlando. Our team lived and worked among the art directors of that park, and contributed to how a brand was literally born. Being part of this process, and being part of a team creating something that at the time had almost no precedent – and no common terminology - allowed us to accept what was happening more easily; to not resist it or to say to ourselves, "we're architects, not brand strategists." We did the work and learned a new kind of park, and a new kind of product, from a new perspective. Clarity began to form around tactics; understanding how crowd management works, how guests WANT to spend a day in a park, and that it might not be what WE think; and that people have tendencies that are to be understood and leveraged so as to improve their enjoyment.

No sooner had we moved on from that project than we were awarded the lead consultancy for Port Aventura. A great site in a beautiful location and the chance to genuinely plan by virtue of these nascent principles was the opportunity of a lifetime. Much of what we still believe lies beneath the plan of that park, and it performs and grows even as I write this. However, there was another lesson, and this time it was humility. Our confidence had peaked as we entered that project. We were certain we could excite the Spanish marketplace with exotic themes and faraway places. Nope. Focus testing corrected our understanding quickly, and we were told by the guest in certain terms that there were themes that absolutely would fail ... turn them completely off ... non-starters. So, we adapted. Big lesson, there. Our intuition may be strong, but it always needs a check mechanism. Always.

SeaWorld: always listening

SeaWorld has shown us that listening closely to the guest is the most critical key to the solution of any problem in the theme park world. In an industry where "what's next" is ALWAYS the most important thing, here we are with a client who must invest in, research, innovate, defend, and evolve the habitat and care of living animals amongst themed attractions... a tremendous, and completely unique responsibility. These guests will show you by their actions and reactions (if you get the place and planning right) that what they really want is to get closer to the animals. Closer physically, closer intellectually, closer emotionally. They feel a bond with those animals, and anything we can do as interpreters, planners, creatives, and conservationists, to get them a unique point-of-view, to create proximity, to... dare I say it... let them touch them, is going to allow them to feel connected; to enjoy ... to feel ... a deeper meaning and a deeper understanding. They'll have a good time, and they'll care more about the future of these animals.



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Observing the success of the SeaWorld parks, studying animals, listening to our clients and their guests, we were inspired to shrink the barrier between us and the “fantastic wild” a bit further. We learned that added value and the depth of an experience can create surprising results. SeaWorld’s hypothesis was that the guests would want to come to touch dolphins, one of the most exciting animals under human care, and the rest of a destination would be kind of a nice “give-away” – foam on the latte, if you will. But what we learned, when we put this hypothesis into action and began carving out winding, beautiful lagoons and breath-taking corals, was that while people come to touch dolphins, the rest of the features at the destination provided some of the highest guest-satisfaction values. All that “extra stuff” which needed a champion through the many value engineering conversations along the way, proved to be meaningful, added value. Really big lesson. That destination was Discovery Cove, honored with a Thea Award by the Themed Entertainment Association, Top Waterpark by Zagat, and the Number One Amusement Park in the World by TripAdvisor.

Chimelong and China: Listen, explain, communicate

We brought this “institutional knowledge” to the table for Chimelong Ocean Kingdom. Of course, we thought we knew how to plan a park, gauge when and where people need to be and how one arrives at an overall program; where to put the food and the retail. However, oftentimes Chinese destination developers don’t trust things like focus group testing and “intent-to-visit” research. They tend to subscribe to the “individual vision” approach, wherein the primary decision-maker gets what he sees as a vision, and our job is to enhance it with the skills we possess. That “East meets West” (but with skepticism) philosophy

was a challenge to work through while preserving the integrity of a park that could see 60,000 people in a day. The big lesson there was “explain, explain, explain,” but “listen, listen, listen,” and realize we were the ones in the New World, and we were the ones who must adapt again. In the end, this collaboration resulted in an original, immense, successful destination; the most popular theme park in China, with numerous Guinness world records and honorable superlatives and awards (including a Thea Award). The collaboration worked; and again, I say, “explain.” The key to a successful relationship is strong, two-way communication. Obvious. When there are multiple languages and two completely different cultures, that need becomes paramount, and it’s difficult. The alternative is failure, however, and unhappy guests. So, we invest. Big lesson. When we meet someone new, that we like and want a relationship with, we want to tell them everything about ourselves. We want to impress them with our wit, our charisma, our athleticism, our intelligence, or even our golf game. But too often we forget to listen. That’s the key: to actively listen.

It took us 50 years of learning about ourselves in America to understand; to evolve from wanting to be the “Big Ego, Big A” architecture firm into the “Little a, Big Heart” destination design firm that we now love being. There may be fewer personal, individual accolades, but there are a whole lot more happy guests in our destination creations. In a whole new, booming frontier of destination development, we’re re-learning to listen, to empathize, to understand, strategize and design, and to move forward – and just a little bit closer – together. ...

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Theming and thrill rides coexist at Chimelong Ocean Kingdom

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The tower of power

ECA2 creates Lake of Illusions multimedia tower for OCT's Happy Valley theme park in Shanghai

New multimedia spectacular opens July 10 and features new Spiro Screen® effect

Technology, architecture and Chinese storytelling tradition meet at Lake of Illusions, by day a unique sculptured tower rising from the lake at Happy Valley theme park, and by night a spectacular multimedia treat for the senses combining architecture, light, sound, video, water and other effects to dazzle and captivate audiences of up to 1,000 people.

OCT Shanghai and ECA2 announced the new attraction opening to the public July 10 at the heart of Happy Valley. Says the show's producer, Jean-Christophe Canizares, Chairman and CEO of ECA2: "To match the grand scale of its context in Happy Valley, Lake of Illusions is conceived to stand out in every dimension. It's a true 360° icon that dominates its setting and will intrigue the park's visitors."

The tower has an octagonal footprint and rises 32 meters high. It is 6.5 meters wide at the base and 3.4 meters wide at the top. Lit from within like an immense lantern it extends upward from the tranquillity of the central lake, leaning skyward at a dramatic

angle, and can be admired from afar in all directions. At night, spectators will thrill to the spectacle of the tower as it seemingly grows wings, with magical effects and projection designed with the goal of appearing to merge through time and space in every direction and on multiple planes.

Total project development time for ECA2 was two years, including one year spent in R&D to develop a unique new effect called Spiro Screen® that is used in Lake of Illusions. This innovative system uses rotating water jets to produce a vast spectral surface on both sides of the icon where video, light and laser images can be viewed. Pixel mapping machines installed in the icon help create a sense of movement, along with moving water jets, moving lights, mist, flames, lasers, and video projection. Eleven sources of sound strategically placed around the site complete the immersive experience.

The team involved in the project was 140 people strong. Show Design and Direction were by ECA2 France; production by OCT and ECA2; Producer: Jean-Christophe Canizares. •••

About OCT Group and Happy Valley

OCT Group is one of the large scale central enterprises subordinated to SASAC, since 1985. Cultural tourism is the most influential main business of the OCT Group. The Happy Valley amusement parks in six cities across the country have formed China's first chain brand of theme parks. Shanghai Happy Valley, national grade-4A tourist attraction, is located in the Sheshan National Tourist Resort of Songjiang in Shanghai. It covers an area of 650,000 square meters and includes more than 100 amusement rides for all ages.

About ECA2 Group

With its headquarters in France, ECA2 group now spans several continents with offices in Paris, Dubai, Hong Kong, and Shenzhen. Universally recognized for its highly skilled teams, ECA2 is a creator and producer of the world's most renowned spectacular multimedia shows. The company has built an envied reputation in mounting worldwide ceremonies, and the most varied spectrum of events.

Over the past 30 years, ECA2 has successfully produced more than 60 major spectacles around the world, notably the "Big-O" show for the 2012 Yeosu International Expo and the recent "Wings of Time" in Singapore and "Fountain of Dreams" in Wuyishan (Fujian), both honored by the prestigious TEA Thea Award.



Next Issue: Technology unleashed

- **Gantom Torch technology**
- **Photography tech**
- **Gaming in the parks**
- **Bonus distribution at IAAPA's European Attractions Show in Barcelona**

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